Roadside Vegetation and Conservation Values in the Shire of Dandaragan

Photo by C. Wilson

May 2009

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

Aware of the need to conserve roadside remnants, the Shire of Dandaragan and local community members liased with the Roadside Conservation Committee (RCC) to survey roadsides in their Shire. Surveys to assess the conservation values of roadside remnants were conducted between September and October 2008. Approximatly, 67.83%, of the Shire's 1363.22km of roadsides were assessed by the RCC for their conservation status and maps were produced via a Geographic Information System (GIS). This represents the majority of non-urban roads. Roadside locations of six nominated weeds and salt affected roadsides were also recorded and mapped onto separate clear overlays.

The results of the survey indicated that high conservation value roadsides covered 23.8% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 44.8%. Medium-low and low conservation value roadsides occupied 18.8% and 12.6%, respectively. A more detailed analysis of results is presented in Part C of this report.

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

- formulating a roadside vegetation management plan for road 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.

Successive 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 Dandaragan 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.

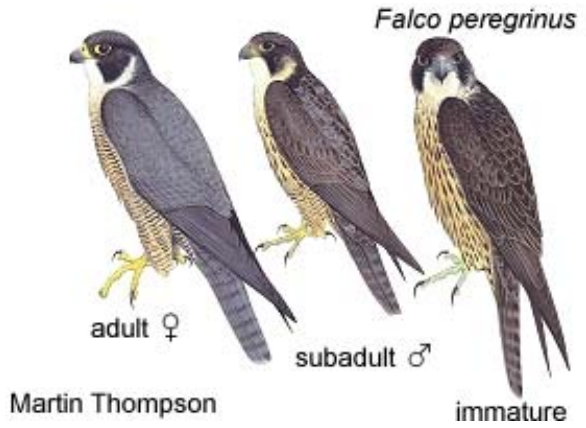
PART A

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, settlements, and other development. The fragmentation of the more or less continuous expanse of native vegetation communities by clearing has resulted in a mosaic of man-made biogeographical islands of small native vegetation remnants.

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



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

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

Other important values of transport corridor remnants are that they:

- are often the only remaining example of original vegetation within extensively cleared areas;
- often contain rare and endangered plants and animals, such that 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 potentially improving local tourism and proving a sense of place;
- often contain sites of Aboriginal /European historic or cultural significance;
- provide windbreaks and stock shelter areas for adjoining farmland by helping to stabilise temperature and reduce evaporation;

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

- assist with erosion and salinity control, in both the land adjoining the road reserve and further afield; and
- provide a valuable source of seed for regeneration projects, especially 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. The lack of awareness of the roadside vegetation's values means that those connected with the roadside are unable to modify their actions to minimise their impact. As a result, activities such as road maintenance and the use of fire, can 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).

Road and roadside vegetation management practices have a significant impact on the conservation of roadside vegetation. The decision to minimise clearing for construction and maintenance, and avoid systematic and indiscriminate clearing which creates irreversible damage, will enable roadside vegetation to continue to act as a biological corridor and habitat.

Due to the movement and disturbance of soil, all road construction and maintenance activities have the potential to introduce and spread weeds and dieback, which have a devastating impact on native vegetation. It is thus important to work from "clean" areas to "dirty" – that is, from areas that are weed and/or dieback free to those areas in which weeds and/or dieback exist. It is also important to clean down machinery before moving between work sites.

Amendments to the *Environmental Protection Act* 1986 have put in place a permit application process designed to assess proposed 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 in any one year, 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 roadside survey recorded populations of seven significant weeds, and their locations were mapped by the RCC onto clear overlays. The seven nominated weeds were:

- Paterson's Curse (*Echium plantagineum*);
- Cape Tulip (*Moraea flaccida and Moraea miniata)*;
- Victorian Tea Tree (*Leptospermum laevigatum*);
- Bridal Creeper (*Asparagus asparagoides*);
- Boneseed (*Chrusanthemoides monilifera* ssp. *Monilifera*);
- Spiny Rush (*Juncus acutus*); and
- *Gladiolus* sp.

The Bridal Creeper smothers other plant species.

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

Roadside populations of these weeds can be observed on the weed overlays provided with the Dandaragan Roadside Conservation Value map (2009). 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.

Paterson's curse is a widespread pasture weed that is spread by seed, making roadside populations a priority for control.

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

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 1.84%, or 25.23km of roads in the Shire of Dandaragan are potentially under threat from salinity (Table 1).

Table 1. Road lengths potentially affected by salinity in the Shires of Dandaragan, Coorow, Moora, Victoria Plains and Chittering.

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
Dandaragan	**1,374.19**	**-**	**13.05**	**-**	**12.18**	**25.23**	**1.84**
Coorow	851.04	-	93.18	7.13	143.85	244.15	28.69
Moora	1,000.21	4.38	123.78	18.63	127.28	274.05	27.40
Victoria Plains	917.73	1.38	46.73	3.05	26.03	77.18	8.41
Chittering	469.20	0.73	2.90	0.23	2.55	6.40	1.36

3.0 Legislative Requirements

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

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

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

State legislation:

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

Commonwealth legislation:

- *Environment Protection and Biodiversity Conservation Act* 1999

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

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

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

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

4.0 Environmentally Sensitive Areas

An Environmentally Sensitive Area (ESA) is an area that requires species protection. Some of the reasons include:

- protection of rare or threatened species of native plants;
- protection of wetlands and water courses;
- 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. The RCC publication *Guidelines for Managing Special Environmental Areas in Transport Corridors* has advice on the design and placement of ESA markers. Workers who come across an ESA 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, is it recommended that the Local Authority 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. 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 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 and upon recommendation of the RCC. The RCC 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.

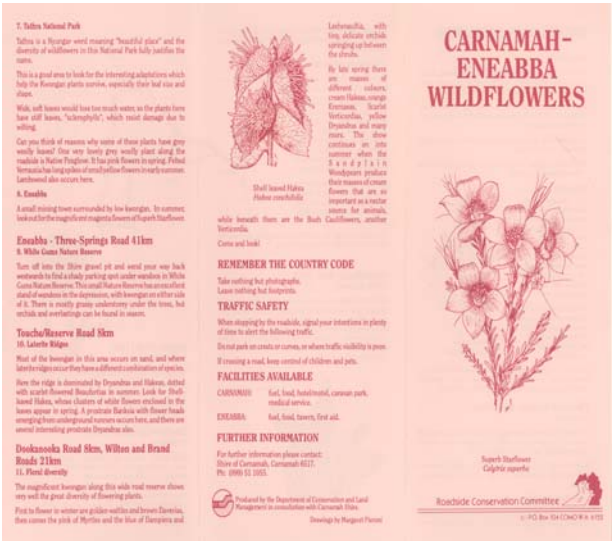
Roadsides are one of the most accessible places for tourists to view wildflowers.
Photo by DEC

There is currently one Flora Road within the Shire of Dandaragan – Jurien Bay road. The roadside survey and the RCV map highlighted a number of other 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 DANDARAGAN

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 has recorded over 2600 species of native plants from the Shire of Dandaragan. The most prolific genera are Acacia (88 spp.), Eucalyptus (79 spp.) and Banksia (71 spp). The complete list of recorded flora can be seen in Appendix 4 of this report.

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 markers. It is the responsibility of the road manager to ensure these markers are installed. The RCC suggests using the publication *Guidelines for Managing Special Environmental Areas in Transport Corridors* as a guideline for managing these sites.

***Grevillea umbellulata* occurs on roadsides in the Shire of Dandaragan.**
Photography by H. Adamson. Photo used with the permission of the WA Herbarium, DEC
http://florabase.calm.wa.gov.au/browse/flora?f=090&level=s&id=2115

As at March 2009, there are 16 species of Declared Rare Flora and 33 species of Priority Flora throughout the Shire of Dandaragan. In total, 2 DRF and 8 Priority species are found in 26 roadside locations in the Shire, these are:

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

Priority Flora

- *Anguizanthas humilis* subsp. *Badgingarra* (P2)
- *Asterolasia drummondii* (P4)
- *Beaufortia bicolor* (P3)
- *Dampiera tephrea* (P2)
- *Eucalyptus macrocarpa* subsp. *elachantha* (P4)

- *Grevilliea saccata* (P4)
- *Thysanotus glaucus* (P4)
- *Hypocalymma tetrapterum* (P3)

Declared Rare Flora

- *Eleocharis keigheryi*
- *Patersonia spirifolia*

For more detailed information regarding DRF in the Shire of Dandaragan, contact the Department of Environment and Conservation (DEC) Flora Officer for the Moora District. In addition, the information provided in this report will not remain current. Thus it is important that the Shire check with the DEC periodically to avoid inadvertent damage to DRF. If roadworks are the be carried out near known DRF sites, it is advisable to contact the DEC at least six weeks in advance.

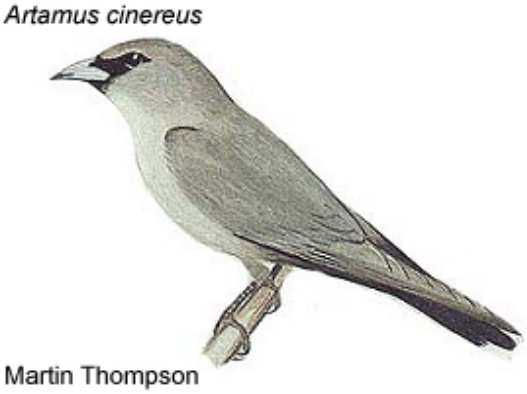
Patersonia spirifolia is endemic to the Shire of Dandaragan and nearby surrounding areas.
Photography by D. Papenfus. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse

3.0 Fauna

The Western Australian Museum records approximately 386 species of fauna from the Dandaragan 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 Dandaragan area, there were 97 bird, 10 amphibia, 33 mammal, 172 fish and 74 reptile species.

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

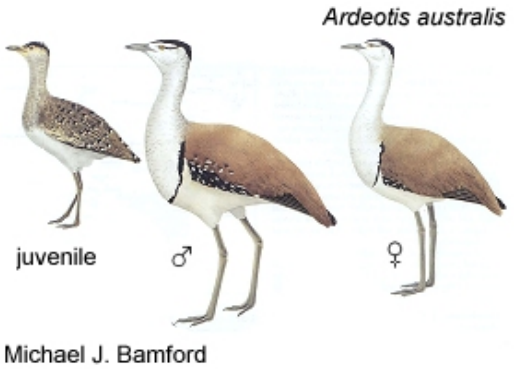
The *Wildlife Conservation Act* 1950 provides for native fauna (and flora) to be specially protected where they are under identifiable threat of extinction, and as such, are considered to be "threatened". Based on distributional data from the Department of Environment and Conservation (DEC), 23 species of threatened and priority fauna have been recorded or sighted throughout the Shire of Dandaragan, and these are listed below.



The Black-faced Woodswallow (*Artamus cinereus*) can be found throughout Australia in all but the wettest and coolest habitats.

Illustration by Martin Thompson. Used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse

- **Australian Bustard (*Ardeotis australis*)**
- **Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris)***
- **White-tailed Black-Cockatoo *(Calyptorhynchus* sp.*)***
- **Hooded Plover (*Charadrius rubicollis*)**
- **Malleefowl (*Leipoa ocellata*)**
- **Western Rosella (*Platycercus icterotis xanthogenys*)**
- **White-browed Babbler (*Pomatostomus superciliosus ashbyi*)**
- **Quenda (*Isoodon obesulus fusciventer*)**
- **Woylie (*Bettongia penicillate ogilbyi*)**
- **Chuditch (*Dasyurus geoffroii*)**
- **Ghost Bat (*Macroderma gigas*)**
- **Tammar Wallaby (*Macropus eugenii derbianus*)**
- **Western Brush Wallaby (*Macropus irma*)**
- **Southern Crested Bellbird (*Oreoica gutturalis gutturalis*)**
- **Dibbler (*Parantechinus apicalis*)**
- **Brush-tailed Phascogale (*Phascogale tapaotafa*)**
- **Broad-faced Potoroo (*Potorous platyops*)**
- **Jewelled Sandplain Ctenotus (*Ctenotus gemmula*)**
- **Lancelin Island Skink (*Ctenotus lancelini*)**
- **Leatherback Turtle (*Dermochelys coriacea*)**
- **Jurien Bay Skink (*Egernia pulchra longicauda*)**
- **Carpet Python (*Morelia spilota imbricata*)**
- **Black-striped Snake (*Neelaps calonotos*)**



The Australian Bustard is one of Australia's largest bird species and has been recorded within the Shire of Dandaragan.

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

The Tammar Wallaby was one of the first mammals recorded by Europeons.

Photo by Lockman Transparencies. Used with the permission of the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase.htm).

4.0 Remnant Vegetation Cover

The *National Objectives and Targets for Biodiversity Conservation 2001-2005* (Environment Australia, 2001) state that vegetation types represented by less than 30% are considered ecologically endangered and in need of protection and restoration wherever they are located. Only 12.0% of the original native vegetation remains in the Shire of Dandaragan and this is located in a variety of tenures from nature reserves to privately owned land. The remaining native vegetation can easily be further depleted if proactive measures are not taken to manage this priceless resource.

Table 2. Remnant vegetation remaining in the agricultural areas of Dandaragan 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)	(%)
Dandaragan	**668,507**	**668,507**	**71,228**	**12.0%**
Coorow	424,583	424,583	164,895	38.8%
Moora	373,148	373,148	50,212	13.5%
Gingin	315,560	315,560	177,688	56.3%
Victoria Plains	255,291	255,291	34,787	13.6%

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

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

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

PART C

ROADSIDE SURVEYS IN THE SHIRE OF DANDARAGAN

1.0 Introduction

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

The majority of the Shire of Dandaragan's 1363.22km of roads (918.51 km, or 67.83%, and the majority of non-urban roads) were surveyed and then assessed to determine the conservation status of the road reserves. The surveys were carried out throughout the months of September and October 2008. The enthusiastic effort of the roadside surveyors, and the support provided by Dandaragan Shire Council ensured that this project was successfully completed. The roadside surveyors were:

- Kirstyn Jackamarra
- Johanna Manning
- Rayana McVee
- John Longman
- Kelly Jackamarra
- Nathan Heal
- Michael Harvey
- David Churchill
- Robert Sarosky

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 Dandaragan. 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 Dandaragan. 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 of remnant vegetation and watercourses on both Crown estate and privately owned land used in the map was obtained from the Department of Environment and Conservation (DEC), Main Roads WA and the Department of Agriculture and Food WA.

1.3 Roadside Conservation Value Categories

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

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

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

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

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

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

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

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

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

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

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

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

2.0 USING THE ROADSIDE CONSERVATION VALUE MAP (RCV MAP)

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

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

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

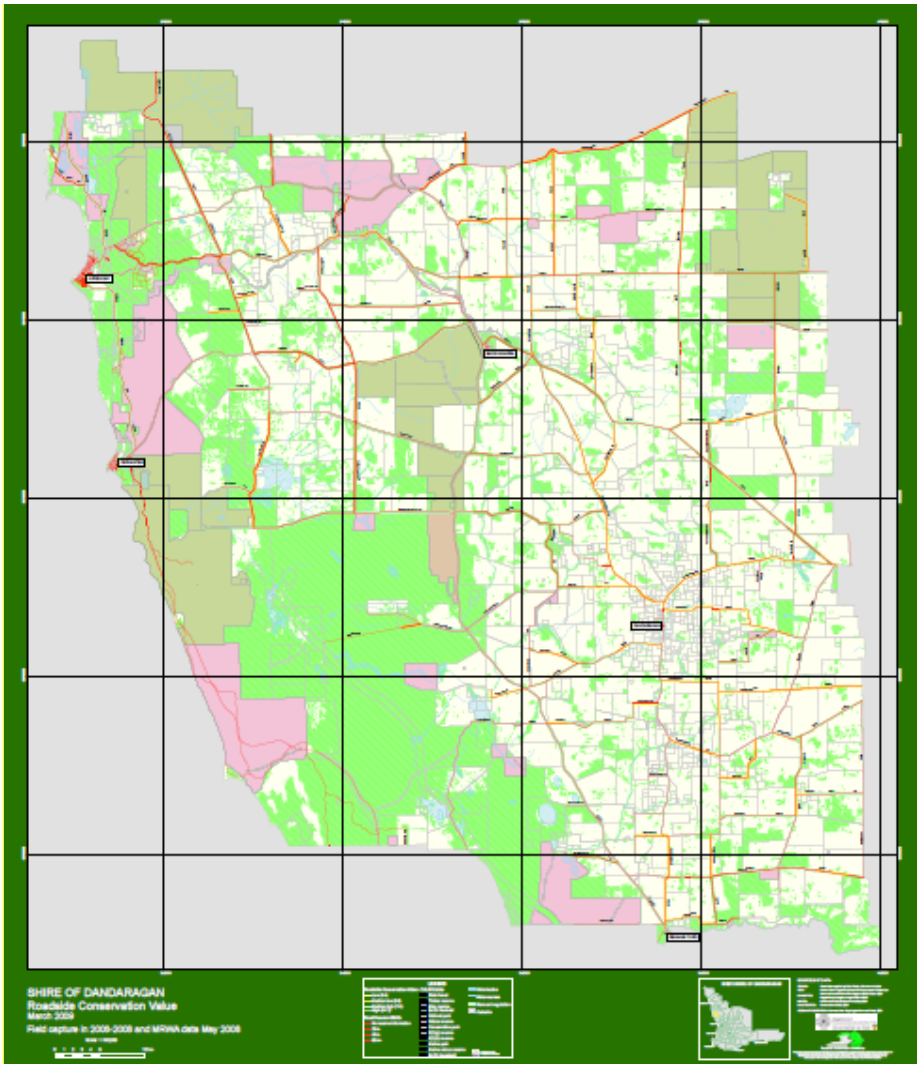


Figure 1. The RCV map depicts roadside conservation values in the Shire of Dandaragan.

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

- roadside vegetation management plans;
- 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 Dandaragan 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 Dandaragan

Length of roadsides surveyed: 1837.02km (918.51 km of road)

Roadside Conservation Status

	Total (km)	(%)
High (9-12)	436.49	23.8
Medium-high (7-8)	823.26	44.8
Medium-low (5-6)	344.85	18.8
Low (0-4)	232.42	12.7
Total	1837.02	100.0

Native Vegetation in Roadsides

	Total (km)	(%)
2-3 vegetation layers	242.49	13.2
1 vegetation layer	1436.55	78.2
0 vegetation layers	157.98	8.6
Total	1837.02	100.0

Number of Native Plant Species

	Total (km)	(%)
Over 20 species	715.46	39.0
6 to 19 species	799.58	43.5
0 to 5 species	321.98	17.5
Total	1837.02	100.0

Predominant Adjoining Land Use

	Total (km)	(%)
Agricultural: completely cleared	929.24	50.59
Agricultural: scattered vegetation	524.67	28.56
Uncleared native vegetation	317.42	17.28
Plantation of non-natives	64.92	3.53
Railway	0.00	0.00
Urban or Industrial	0.77	0.04
Other	0.00	0.00
Total	1837.02	100.0

Weed Infestation

	Total (km)	(%)
Light <20% weeds	936.92	51.0
Medium 20-80% weeds	324.19	17.6
Heavy >80% weeds	575.91	31.4
Total	1837.02	100.0

Roadside Conservation Values

Score	Total (km)	(%)
0	0.00	0.0
1	43.93	2.4
2	99.40	5.4
3	39.05	2.1
4	50.04	2.7
5	140.61	7.7
6	204.24	11.1
7	336.88	18.3
8	486.38	26.5
9	306.03	16.7
10	106.34	5.8
11	21.00	1.1
12	3.12	0.2
Total	1837.02	100.0

Width of Vegetated Roadside

	Total (km)	(%)
1 to 5 m	177.82	9.7
5 to 20 m	763.36	41.5
Over 20 m	524.99	28.6
Unknown	370.85	20.2
Total	1837.02	100.0

Extent of Native Vegetation

	Total (km)	(%)
Over 80%	554.22	30.2
20% to 80%	966.29	54.2
Less than 20%	286.51	15.6
Total	1837.02	100.0

Value as a Biological Corridor

	Total (km)	(%)
High	789.92	43.0
Medium	896.47	48.8
Low	150.63	8.2
Total	1837.02	100.0

Roadside surveys were carried out in the Shire of Dandaragan

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

Width of Road Reserve

The width of road reserves in the Shire of Dandaragan was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 516.25km (56.21%) of roads falling into this category. Roadsides lacking a reserve covered 129.19km (14.06%), those with a 40m reserve covered 137.35km (14.95%), and those with a 60m wide reserve covered 86.14km (9.38). Of the remaining roads, 15.96km (1.74%) were 80 metres in width and 33.62km (3.66%) of road reserves were 100 meters wide.

Width of Road Reserve - Dandaragan		
	Total km	%
0 m	129.19	14.06
20 m	516.25	56.21
40 m	137.35	14.95
60 m	86.14	9.38
80 m	15.96	1.74
100 m	33.62	3.66
Total	918.51	100.0

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

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). Approximately 41.55% (763.36km) of roadside vegetation was between 5 to 20 metres in width, followed by 524.99km (28.58%) of roadsides where the width of vegetation was over 20m. Roadside vegetation between 1 and 5 metres in width spanned 177.82km (9.68%), whilst the width was unknown for 370.85km (20.19%) of the roadsides surveyed.

Width of Vegetated Roadside - Dandaragan		
	Total km	%
1-5 m	177.82	9.68
5-20 m	763.36	41.55
Over 20 m	524.99	28.58
Unknown	370.85	20.19
Total	1837.02	100.0

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

Native Vegetation on Roadsides

The number of native vegetation layers present, i.e. tree, shrub and/or ground layers, determined the 'native vegetation on roadside' value. Sections with two to three layers of native vegetation covered 13.20% of roadsides (242.49km), 78.2% (1436.55km) of roadsides had only one layer and 8.6% (157.98km) had no layers of native vegetation (Table 3 and Figure 2).

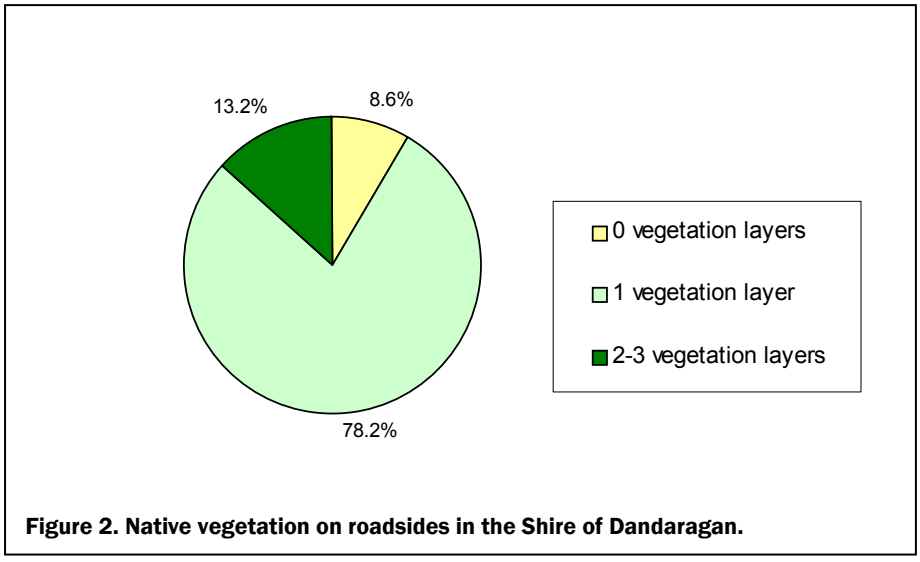


Figure 2. Native vegetation on roadsides in the Shire of Dandaragan.

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 39.0% (715.46km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 43.5% (799.58km) of the roadside. In total, 17.5% (321.98km) contained less than 5 plant species (Table 3 and Figure 3).

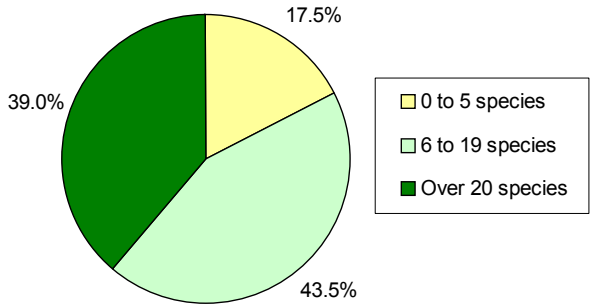


Figure 3. Number of native plant species in roadsides in the Shire of Dandaragan.

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 30.2% (554.22km) of the roadsides surveyed. Survey sections with medium vegetation cover, i.e. 20% to 80%, accounted for 54.2% (966.29km) of the roadsides. The remaining 15.6% (286.51km) had less than 20% native vegetation and therefore a low 'extent of native vegetation' value (Table 3 and Figure 4).

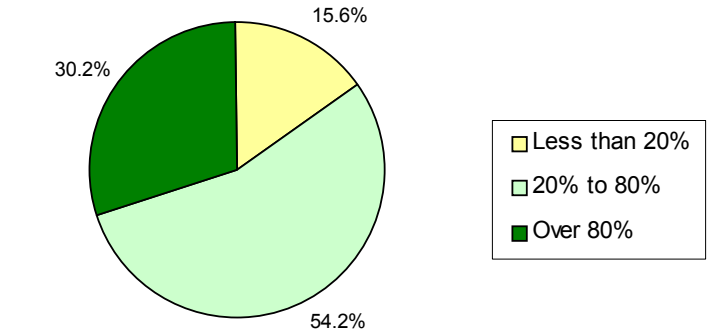


Figure 4. Extent of native vegetation in roadsides in the Shire of Dandaragan.

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 43.0% (789.92km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 48.8% (896.47km), and roadsides with low value as a biological corridor occurred along 8.2% (150.63km) of the roadsides surveyed (Table 3 and Figure 5).

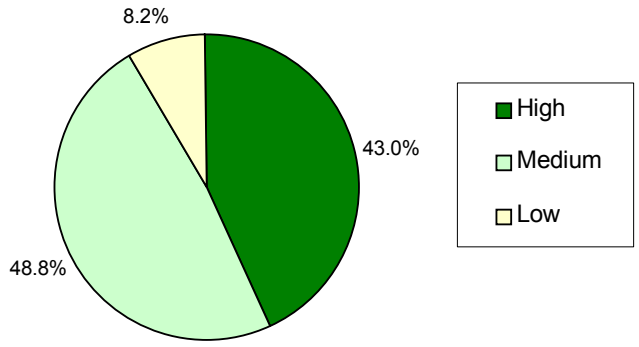


Figure 5. Roadside vegetation value as a biological corridor in the Shire of Dandaragan.

Weed Infestation

Light levels of weed infestation (weeds comprising less than 20% of total plants), were recorded on 51.0% (936.92km) of the roadsides surveyed, medium level weed infestation (weeds comprising 20-80% of the total plants) occurred on 17.6% (324.19km) of the roadsides and 31.4% of roadsides (575.91km) were heavily infested with weeds (weeds comprising more than 80% of the total plants) (Table 3 and Figure 6).

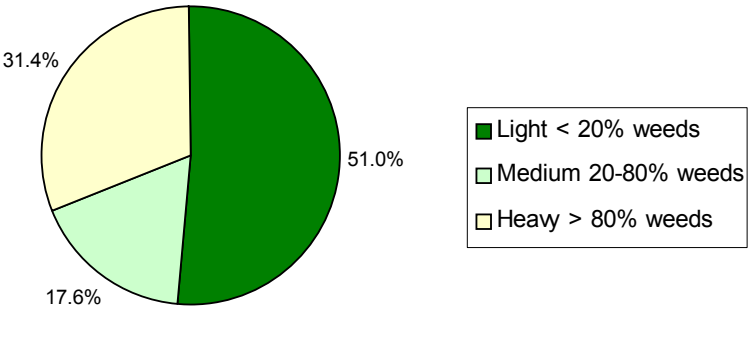


Figure 6. Weed infestation along roadsides in the Shire of Dandaragan.

Predominant Adjoining Land Use

Uncleared native vegetation was present on 17.28% (317.42km) of the land adjoining roadsides, whilst 50.59% (929.24km) of roadsides adjoined land that had been completely cleared for agriculture. Land cleared for agriculture, containing a scattered distribution of native vegetation comprised 28.56% (524.67km) of the roadsides. Plantations of non-natives adjoined 3.53% (64.92km) of roadsides and Urban or Industrial land uses adjoined 0.04% (0.77km) of roadsides (Table 3 and Figure 7).

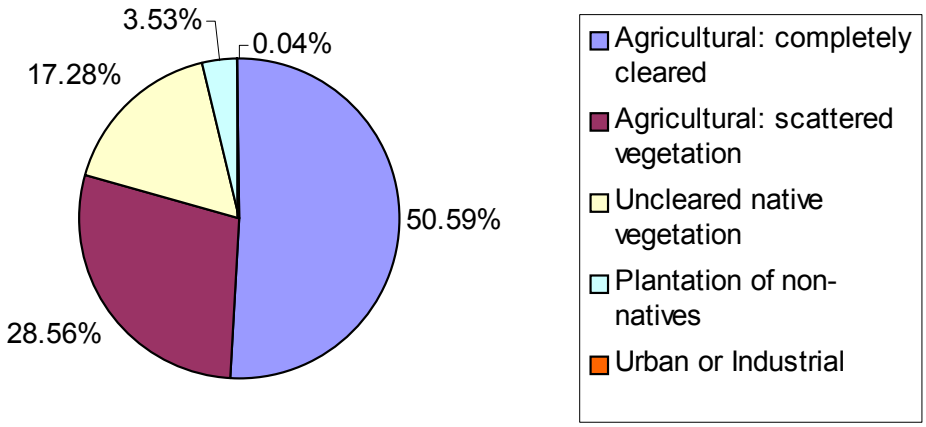


Figure 7. Predominant adjoining land use in the Shire of Dandaragan.

Nominated Weeds

The following weeds are depicted on clear overlays accompanying the 2009 Roadside Conservation Value map:

- Paterson's Curse (*Echium plantagineum*);
- Cape Tulip (*Moraea flaccida and Moraea miniata)*;
- Victorian Tea Tree (*Leptospermum laevigatum*);
- Bridal Creeper (*Asparagus asparagoides*);
- Boneseed (*Chrusanthemoides monilifera* ssp. *Monilifera*);
- Spiny Rush (*Juncus acutus*); and
- *Gladiolus* sp.

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

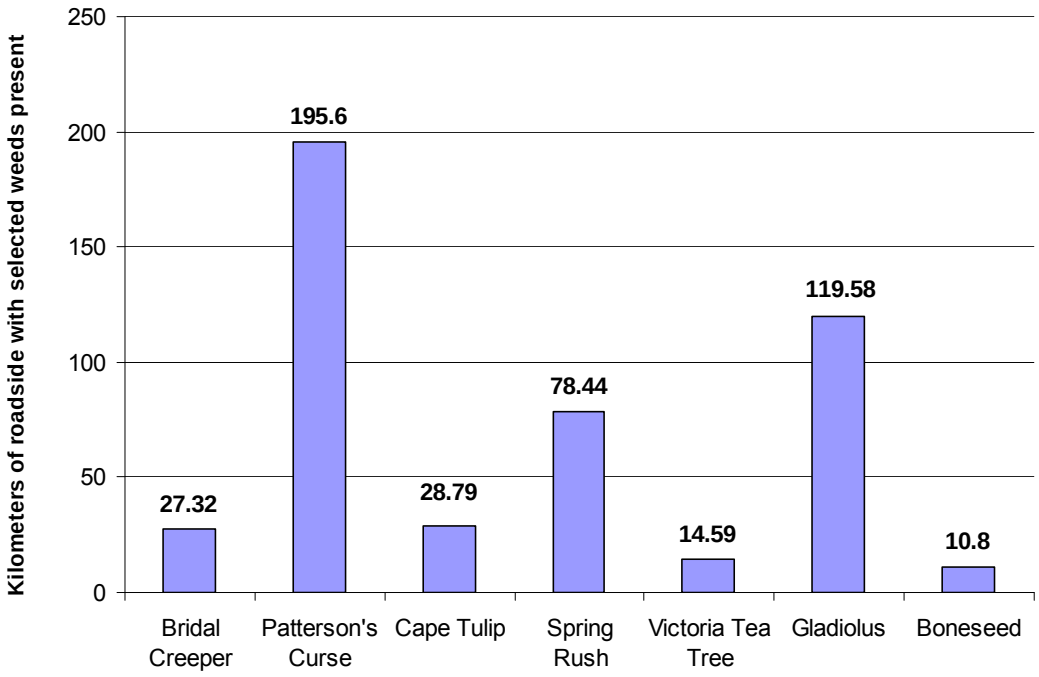
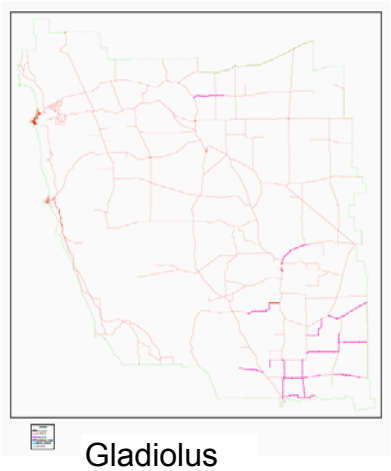
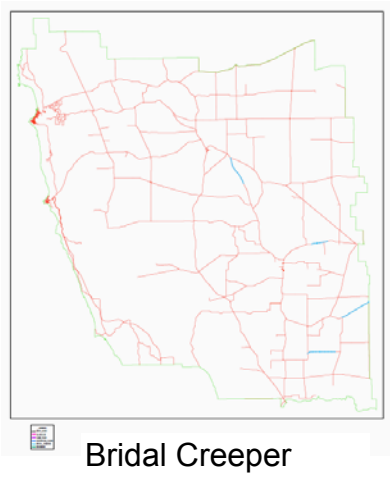
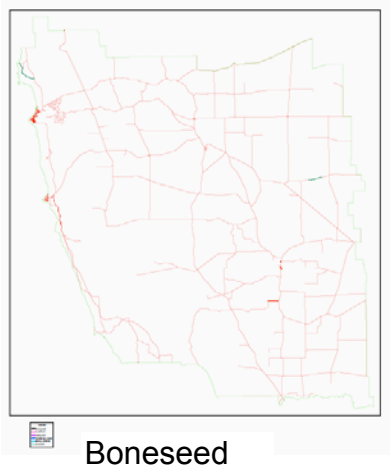


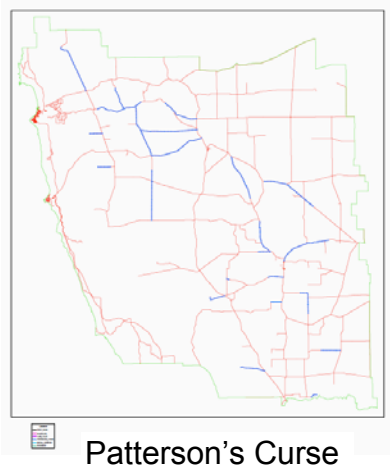
Figure 8. Presence of nominated weed groups along roads in the Shire of Dandaragan.

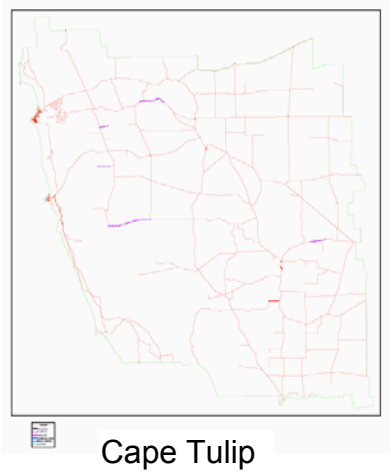
Of the nominated weeds species, Patterson's Curse was the most prevalent, recorded along 195.6km of the roads surveyed. The next most commonly recorded weeds were Gladiolus and Spring Rush, recorded along 119.58km and 78.44km of roads respectively. Cape Tulip was the next most commonly recorded weed, occurring along 28.79km of roads, then Bridal Creeper, recorded along 27.32km of roads, followed by Victorian Tea Tree, recorded along 14.59km of roads and Boneseed was recorded along 10.8km (Figure 8).











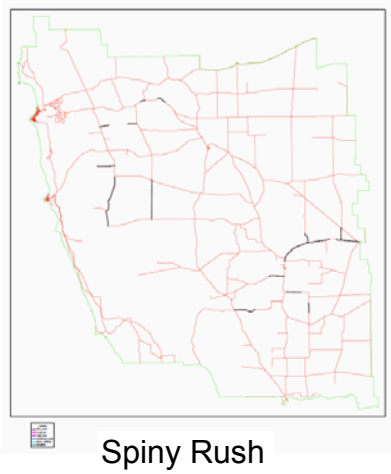


Figure 9. Spatial extent of nominated weeds on roadsides in the City of Geraldton-Greenough.

Conservation Value Scores

Conservation value scores were calculated for each section of roadside surveyed. Scores range from 0 to 12, from lowest to highest conservation value respectively (Figure 10). The most occurring roadside conservation value score was 8, with 486.38km of roadsides recording this score. Following this, a score of 7 was recorded along 336.88km of roadsides, a score of 9 covered 306.03km and a score of 6 was surveyed along 204.24km of roadsides. Roadsides with a score of 5 covered 140.61km, a score of 10 covered 106.34km, and roadsides with a score of 2 spanned 99.40km. Roadsides with a score of 4 spanned 50.04km, a score of 1 spanned 43.93km, roadsides scoring 3 covered 39.05km, a score of 11 spanned 21.0km, a score of 12 covered 3.12km. There were no roadsides that recorded a score of 0.

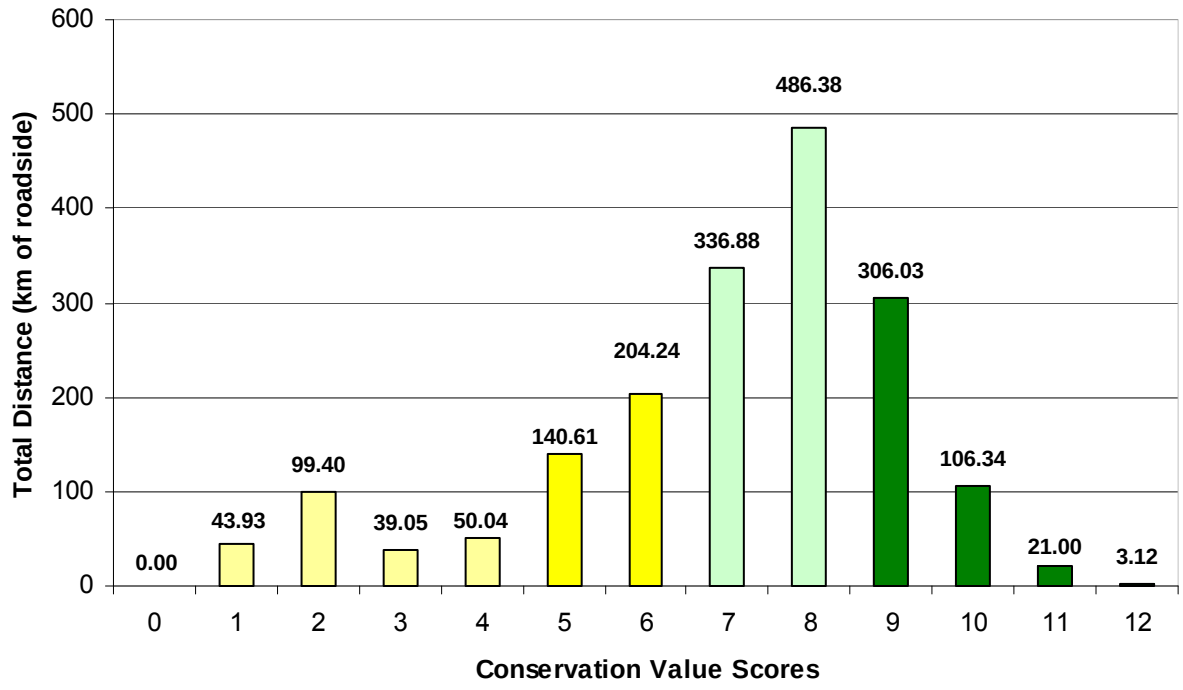


Figure 10. Conservation value scores of all roadsides surveyed in the Shire of Dandaragan.

Conservation Status

The conservation status category indicates the combined conservation value of roadsides surveyed in the Shire of Dandaragan. Roadside sections of high conservation value covered 23.8% (436.49km) of the roadsides surveyed. Medium-high conservation value roadsides accounted for 44.8% of the total surveyed (823.26km), medium-low conservation roadside covered 18.8% (344.85km) of the total roadsides surveyed. Roadsides of low conservation value occupied 12.6% (232.42km) of the roadsides surveyed (Table 3 and Figure 11).

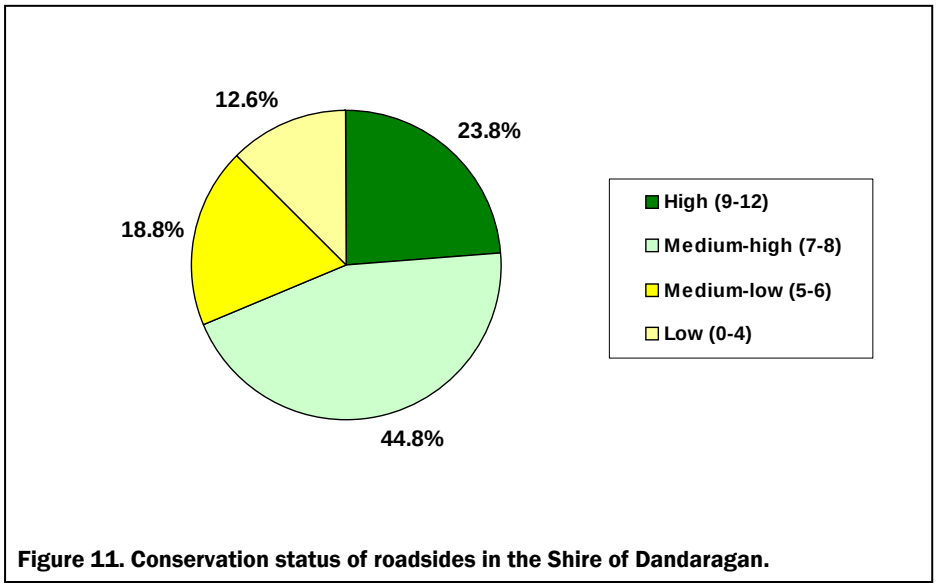


Figure 11. Conservation status of roadsides in the Shire of Dandaragan.

Flora Roads

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

There is presently one Flora Road in the Shire of Dandaragan – Jurien Road. The roadside survey and the 2009 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 Dandaragan include:

- Waddi Rd;
- McNamara Rd;
- Gillingarra Rd;
- Mullering Rd; and
- Yerramullah Rd.

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 0423. 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 Flora Roads into tourist, wildflower and/or scenic drives.

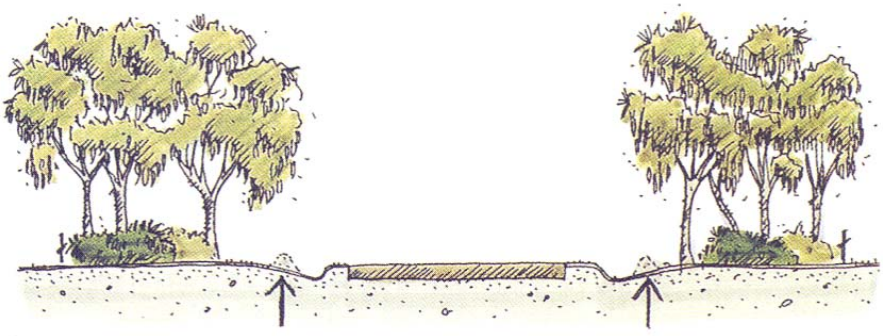
1.3 Improve roadside sections of medium to low conservation value by:

- 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:

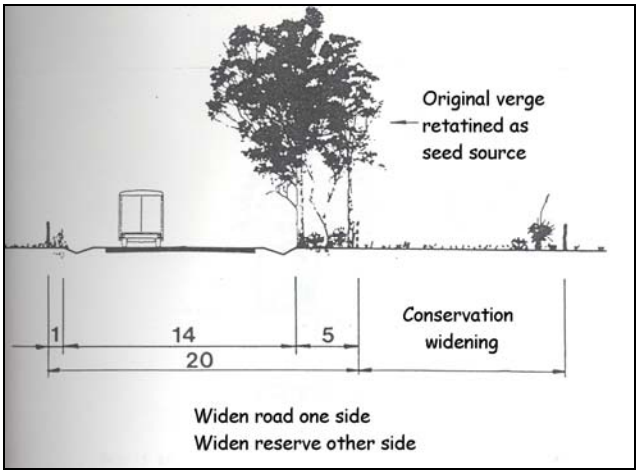
- adopting a road design that occupies the minimum space;
- diverting the line of a table drain to avoid disturbing valuable flora;
- pruning branches, rather than removing the whole tree or shrub;
- not dumping spoil on areas of native flora;
- applying the Fire Threat Assessment (see RCC Roadside Manual) 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) 9334 0423.

4.0 Setting Objectives

The objective of all roadside management should be to:

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

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Appendix

1

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

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

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

Date ______________
Observer(s) ______________
Road Name ______________
Shire ______________
Nearest named place ______________
Direction of travel ______________
Section No. ______________
Starting Point ______________
Odometer reading ______________
Ending Point ______________
Odometer reading ______________
Length of Section ______________

WIDTH OF ROAD RESERVE (m) _______

Side of the road — Left Right

WIDTH OF VEGETATED ROADSIDE

1 – 5 m ☐ ☐
5 – 20 m ☐ ☐
Over 20m ☐ ☐

NATIVE VEGETATION ON ROADSIDE

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

EXTENT OF NATIVE VEGETATION ON ROADSIDE

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

No. OF DIFFERENT NATIVE SPECIES

0 – 5 ☐ ☐
6 – 19 ☐ ☐
Over 20 ☐ ☐

VALUE AS A BIOLOGICAL CORRIDOR

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

PREDOMINANT ADJOINING LANDUSE

Agricultural crop or pasture:
- Completely cleared ☐ ☐
- Scattered ☐ ☐

Uncleared land ☐ ☐
Plantation of non-native trees ☐ ☐
Urban or Industrial ☐ ☐
Railway reserve parallel to road ☐ ☐
Drain reserve parallel to road ☐ ☐
Other: ☐ ☐

UTILITIES

Utility Present ☐ ☐
Utility Absent ☐ ☐
Type: ☐ ☐

GENERAL WEEDS

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

NOMINATED WEEDS

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

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

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

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

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

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

NOMINATED WILDCARD

OFFICE USE ONLY

Conservation value score ☐ ☐

Appendix

2

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040001	1	0	0.5	0.5	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	S	S	7	7	
5040001	2	0.5	1.5	1	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	S	8	8	
5040001	3	1.5	2.6	1.1	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	2	2	1	1	S	C	7	8	
5040001	4	2.6	4	1.4	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	2	2	1	1	S	S	7	7	
5040001	5	4	4.6	0.6	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	2	2	0	0	C	C	7	7	
5040001	6	4.6	5.8	1.2	CATABY RD	East	08-Oct-08	20	1	1	0	0	0	0	2	2	2	2	C	C	7	7	
5040001	7	5.8	6.58	0.78	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	S	S	7	7	
5040001	8	6.58	7	0.42	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	U	S	6	7	
5040001	9	7	7.8	0.8	CATABY RD	East	08-Oct-08	20	2	2	1	1	1	1	2	2	2	2	S	C	9	10	
5040001	10	7.8	11.4	3.6	CATABY RD	East	08-Oct-08	20	2	2	0	0	1	1	1	1	2	2	S	S	7	7	
5040001	11	11.4	12.8	1.4	CATABY RD	East	08-Oct-08	20	1	1	0	0	0	0	1	1	1	1	C	S	5	4	
5040001	12	12.8	15	2.2	CATABY RD	East	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	S	S	7	7	PATERSONS_CURSE SPINY_RUSH
5040001	13	15	16.8	1.8	CATABY RD	East	08-Oct-08	20	1	1	0	0	0	0	1	1	1	1	S	S	4	4	PATERSONS_CURSE SPINY_RUSH
5040002	1	0	1.2	1.2	DANDARAGAN RD	East	30-Sep-08	20	2	1	1	0	1	0	0	0	2	2	C	C	8	5	SPINY_RUSH
5040002	2	1.2	3.1	1.9	DANDARAGAN RD	East	30-Sep-08	20	1	1	1	0	1	0	0	0	2	0	C	C	7	3	SPINY_RUSH
5040002	3	3.1	4	0.9	DANDARAGAN RD	East	30-Sep-08	20	1	1	1	1	1	1	0	0	2	2	U	U	5	5	SPINY_RUSH
5040002	4	4	6.3	2.3	DANDARAGAN RD	East	30-Sep-08	20	1	1	0	0	0	0	0	0	1	1	S	S	3	3	SPINY_RUSH
5040002	5	6.3	8.2	1.9	DANDARAGAN RD	East	30-Sep-08	20	1	1	0	0	1	0	0	0	1	0	S	U	4	1	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040002	6	8.2	11.1	2.9	DANDARAGAN RD	East	30-Sep-08	20	0	2	0	1	0	1	0	0	0	2	S	U	1	6	BRIDAL_CREEPER PATERSONS_CURSE CAPE_TULIP SPINY_RUSH
5040002	7	11.1	12.6	1.5	DANDARAGAN RD	East	30-Sep-08	20	0	1	0	0	0	1	0	0	0	2	S	U	1	4	BRIDAL_CREEPER PATERSONS_CURSE CAPE_TULIP SPINY_RUSH
5040002	8	12.6	13.79	1.19	DANDARAGAN RD	East	30-Sep-08	20	0	2	0	1	0	1	1	0	0	2	S	U	1	7	GLADIOLUS PATERSONS_CURSE SPINY_RUSH
5040002	9	13.79	22.02	8.23	DANDARAGAN RD	East	30-Sep-08	20	0	0	0	1	0	0	0	0	0	0	S	S	1	2	GLADIOLUS PATERSONS_CURSE SPINY_RUSH
5040002	10	48.28	59.1	10.82	DANDARAGAN RD	South	30-Sep-08	20	1	1	1	1	0	0	0	0	2	2	C	C	5	5	GLADIOLUS
5040004	1	0	13.57	13.57	MUNBINEA RD	North	02-Oct-08	60	1	1	1	1	2	2	0	0	2	1	C	C	6	5	SPINY_RUSH
5040005	1	0	0.7	0.7	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040005	2	0.7	1.7	1	NORTH WEST RD	South East	08-Oct-08	20	1	0	1	1	1	1	2	2	1	1	S	U	7	5	
5040005	3	1.7	4.7	3	NORTH WEST RD	South East	08-Oct-08	20	1	1	2	2	2	2	2	2	2	2	U	U	9	9	
5040005	4	4.7	6	1.3	NORTH WEST RD	South East	08-Oct-08	20	1	1	2	2	2	2	2	2	2	2	U	S	9	10	
5040005	5	6	6.6	0.6	NORTH WEST RD	South East	08-Oct-08	20	1	1	2	2	2	2	2	2	2	2	U	U	9	9	
5040005	6	6.6	10	3.4	NORTH WEST RD	South East	08-Oct-08	20	2	2	1	1	1	1	2	2	1	1	S	S	7	7	
5040005	7	10	12.6	2.6	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	1	1	S	S	7	7	
5040005	8	12.6	14.82	2.22	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	1	1	S	S	7	7	
5040005	9	14.82	16	1.18	NORTH WEST RD	South East	08-Oct-08	20	1	1	0	0	0	0	0	0	1	1	S	S	3	3	PATERSONS_CURSE
5040005	10	16	19.9	3.9	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	S	9	8	PATERSONS_CURSE
5040005	11	19.9	23.2	3.3	NORTH WEST RD	South East	08-Oct-08	20	2	2	1	1	1	1	2	2	1	1	S	S	8	8	PATERSONS_CURSE

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040005	12	23.2	29.7	6.5	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	1	1	C	S	8	7	PATERSONS_CURSE
5040005	13	29.7	30.4	0.7	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	2	2	2	2	2	2	U	U	8	8	
5040005	14	30.4	30.6	0.2	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	S	7	8	
5040005	15	30.6	32.5	1.9	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	S	8	8	
5040005	16	32.5	49.16	16.66	NORTH WEST RD	South East	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	U	9	9	
5040006	1	0	1.1	1.1	BADGINGARRA RD	North	07-Oct-08	20	0	0	0	0	0	0	0	0	0	0	S	S	1	1	
5040006	2	1.1	3.5	2.4	BADGINGARRA RD	North	07-Oct-08	20	1	1	1	1	0	0	1	1	2	2	S	S	6	6	
5040006	3	3.5	4.3	0.8	BADGINGARRA RD	North	07-Oct-08	20	0	0	0	0	0	0	1	1	2	2	C	C	4	4	
5040006	4	4.3	5.1	0.8	BADGINGARRA RD	North	07-Oct-08	20	0	0	0	0	0	0	0	0	1	1	S	S	2	2	
5040006	5	5.1	8.8	3.7	BADGINGARRA RD	North	07-Oct-08	20	1	1	0	0	0	0	0	0	1	1	S	S	3	3	PATERSONS_CURSE
5040006	6	8.8	10.7	1.9	BADGINGARRA RD	North	07-Oct-08	20	1	1	0	0	0	0	0	0	1	1	S	S	3	3	PATERSONS_CURSE
5040006	7	10.7	11.1	0.4	BADGINGARRA RD	North	07-Oct-08	20	0	0	0	0	0	0	0	0	1	1	S	S	2	2	PATERSONS_CURSE
5040006	8	11.1	11.8	0.7	BADGINGARRA RD	North	07-Oct-08	20	1	1	0	0	0	0	1	1	1	1	S	S	4	4	PATERSONS_CURSE
5040006	9	11.8	13.5	1.7	BADGINGARRA RD	North	07-Oct-08	20	0	0	0	0	0	0	0	0	1	1	S	S	2	2	PATERSONS_CURSE
5040006	10	13.5	14.5	1	BADGINGARRA RD	North	07-Oct-08	20	0	2	0	0	0	0	0	0	2	1	S	S	3	4	
5040006	11	14.5	16.3	1.8	BADGINGARRA RD	North	07-Oct-08	20	1	1	0	0	0	0	0	0	2	2	S	S	4	4	
5040006	12	16.3	16.59	0.29	BADGINGARRA RD	North	07-Oct-08	20	1	0	0	0	0	0	0	0	1	1	S	S	3	2	
5040006	13	16.59	17.72	1.13	BADGINGARRA RD	North	07-Oct-08	20	0	0	0	0	0	0	0	0	1	1	S	S	2	2	
5040006	14	17.72	19	1.28	BADGINGARRA RD	North	07-Oct-08	20	1	1	0	0	0	1	0	0	2	2	S	S	4	5	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040006	15	19	20.3	1.3	BADGINGARRA RD	North	07-Oct-08	20	0	0	0	0	0	0	0	0	0	1	S	S	1	2	
5040006	16	20.3	23.7	3.4	BADGINGARRA RD	North	07-Oct-08	20	0	1	0	0	0	0	0	0	1	1	S	S	2	3	PATERSONS_CURSE
5040006	17	23.7	24.8	1.1	BADGINGARRA RD	North	07-Oct-08	20	1	0	1	1	1	1	2	2	2	1	S	S	8	6	PATERSONS_CURSE
5040006	18	24.8	32.4	7.6	BADGINGARRA RD	North	07-Oct-08	20	1	1	1	1	2	2	2	2	2	2	S	S	8	8	PATERSONS_CURSE BRIDAL_CREEPER
5040008	1	0	6.1	6.1	WATHEROO RD	East	09-Oct-08	40	1	1	2	2	1	1	0	0	1	1	S	U	6	5	
5040008	2	6.1	26.6	20.5	WATHEROO RD	East	09-Oct-08	40	1	1	2	2	2	2	0	0	1	1	C	C	7	8	
5040008	3	26.6	28.7	2.1	WATHEROO RD	East	09-Oct-08	0	1	1	2	2	2	2	0	0	2	1	C	C	7	7	
5040008	4	28.7	39.7	11	WATHEROO RD	East	09-Oct-08	0	1	1	2	2	2	2	2	2	2	2	C	C	9	9	
5040009	1	0	14.38	14.38	CADDA RD	West	02-Oct-08	0	1	1	2	2	2	2	2	2	1	1	C	C	8	9	PATERSONS_CURSE
5040009	2	14.38	26.6	12.22	CADDA RD	West	02-Oct-08	60	1	1	2	2	2	2	2	2	1	1	C	C	10	10	
5040010	1	4.39	5.93	1.54	GILLINGARRA RD	North	06-Oct-08	20	2	2	1	1	2	2	2	2	2	2	C	C	11	11	GLADIOLUS
5040010	2	5.93	6.53	0.6	GILLINGARRA RD	North	06-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	U	8	7	GLADIOLUS
5040010	3	6.53	6.91	0.38	GILLINGARRA RD	East	06-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	C	8	9	GLADIOLUS
5040010	4	6.91	8.23	1.32	GILLINGARRA RD	East	06-Oct-08	20	2	2	1	1	2	2	2	2	2	2	C	C	11	11	GLADIOLUS
5040010	5	8.23	9.42	1.19	GILLINGARRA RD	East	06-Oct-08	20	2	2	1	1	1	1	1	1	2	2	P	C	8	9	GLADIOLUS
5040010	6	9.42	10.6	1.18	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	2	1	1	2	2	1	2	C	U	9	9	GLADIOLUS
5040010	7	10.6	11.48	0.88	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	2	1	1	2	2	1	2	S	U	9	8	
5040010	8	11.48	12.14	0.66	GILLINGARRA RD	East	23-Sep-08	40	2	2	2	2	1	1	0	0	2	2	U	U	7	7	
5040010	9	12.14	13.46	1.32	GILLINGARRA RD	East	23-Sep-08	40	2	2	2	2	1	1	0	0	1	2	C	U	7	8	GLADIOLUS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040010	10	13.46	14.12	0.66	GILLINGARRA RD	East	23-Sep-08	40	2	2	2	2	1	1	2	2	1	2	P	U	9	9	GLADIOLUS
5040010	11	14.12	14.43	0.31	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	2	1	1	2	0	1	2	S	U	7	8	
5040010	12	14.43	14.98	0.55	GILLINGARRA RD	East	23-Sep-08	40	2	2	2	2	1	1	0	0	2	2	U	U	7	7	
5040010	13	14.98	15.36	0.38	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	1	1	1	2	2	1	2	P	U	8	8	
5040010	14	15.36	16.02	0.66	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	1	1	1	2	2	1	2	C	U	8	9	
5040010	15	16.02	17.18	1.16	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	1	1	1	2	2	2	1	U	S	8	8	
5040010	16	17.18	17.51	0.33	GILLINGARRA RD	East	23-Sep-08	40	2	2	2	1	1	1	2	2	2	1	U	S	8	9	
5040010	17	17.51	17.92	0.41	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	1	1	1	2	2	2	1	U	C	9	8	
5040010	18	17.92	19.33	1.41	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	1	1	1	2	2	2	1	U	S	8	8	GLADIOLUS
5040010	19	19.33	20.1	0.77	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	1	1	1	2	2	1	1	S	I	7	8	GLADIOLUS
5040010	20	20.1	20.32	0.22	GILLINGARRA RD	East	23-Sep-08	40	1	1	1	1	1	1	2	2	1	1	C	C	8	8	GLADIOLUS
5040010	21	20.32	20.98	0.66	GILLINGARRA RD	East	23-Sep-08	40	1	2	1	1	1	1	2	2	1	1	S	P	8	7	GLADIOLUS
5040010	22	20.98	21.42	0.44	GILLINGARRA RD	East	23-Sep-08	40	2	2	1	1	1	1	2	2	1	1	C	P	8	9	GLADIOLUS
5040010	23	21.42	22.3	0.88	GILLINGARRA RD	East	23-Sep-08	40	1	1	1	1	1	1	1	2	1	1	S	U	6	6	GLADIOLUS
5040010	24	22.3	22.96	0.66	GILLINGARRA RD	East	23-Sep-08	40	1	1	1	1	1	1	2	2	1	1	S	U	6	7	GLADIOLUS
5040010	25	22.96	25.05	2.09	GILLINGARRA RD	East	23-Sep-08	0	1	1	2	2	1	1	0	0	1	1	S	U	5	6	GLADIOLUS
5040010	26	25.05	26.8	1.75	GILLINGARRA RD	East	23-Sep-08	40	1	1	2	2	1	1	2	2	2	2	C	C	10	10	
5040011	1	0	0.7	0.7	DAMBADGIE RD	North	30-Sep-08	20	0	1	0	0	0	0	0	0	0	0	C	C	1	2	
5040011	2	0.7	2.6	1.9	DAMBADGIE RD	North	30-Sep-08	20	0	0	0	0	0	0	0	0	0	0	S	S	1	1	SPINY_RUSH

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040011	3	2.6	4.5	1.9	DAMBADGIE RD	North	30-Sep-08	20	0	0	0	0	0	0	0	0	0	0	C	P	2	1	SPINY_RUSH
5040011	4	4.5	9.5	5	DAMBADGIE RD	North	30-Sep-08	20	0	0	0	0	0	0	0	0	0	0	C	S	2	2	PATERSONS_CURSE
5040011	5	9.5	11.7	2.2	DAMBADGIE RD	North	30-Sep-08	20	0	0	0	0	0	0	0	0	0	0	C	C	2	2	PATERSONS_CURSE SPINY_RUSH
5040011	6	11.7	14.96	3.26	DAMBADGIE RD	North	30-Sep-08	20	2	2	1	1	1	1	0	0	2	2	C	C	8	8	
5040012	1	0	1.2	1.2	MCNAMARA RD	South West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	U	7	7	
5040012	2	1.2	3.8	2.6	MCNAMARA RD	South West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040012	3	3.8	4.9	1.1	MCNAMARA RD	South West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	P	9	8	
5040012	4	4.9	6.1	1.2	MCNAMARA RD	South West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040012	5	6.1	6.7	0.6	MCNAMARA RD	South West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	C	7	9	
5040012	6	6.7	8.23	1.53	MCNAMARA RD	South West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040013	1	0	0.3	0.3	WINJARDIE RD	North	12-Oct-08	20	1	1	0	0	1	1	1	1	1	1	S	S	5	5	
5040013	2	0.3	1.3	1	WINJARDIE RD	North	12-Oct-08	20	1	1	1	1	2	2	2	2	2	2	S	U	9	8	
5040013	3	1.3	4.4	3.1	WINJARDIE RD	North	12-Oct-08	20	1	1	1	1	1	2	0	0	2	2	C	S	7	7	
5040013	4	4.4	4.8	0.4	WINJARDIE RD	North	12-Oct-08	20	2	1	1	1	2	2	1	1	2	2	C	C	10	9	
5040013	5	4.8	5.9	1.1	WINJARDIE RD	North	12-Oct-08	20	1	1	1	1	1	1	2	0	1	1	C	C	8	6	
5040013	6	5.9	6.4	0.5	WINJARDIE RD	North	12-Oct-08	20	0	0	0	0	0	0	0	0	0	0	P	C	2	2	
5040013	7	6.4	7.1	0.7	WINJARDIE RD	North	12-Oct-08	20	1	1	1	1	1	1	1	1	2	2	P	C	7	8	
5040013	8	7.1	9.04	1.94	WINJARDIE RD	North	12-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	C	8	8	
5040014	1	0	3.6	3.6	MARCHAGEE TK	East	09-Oct-08	60	1	1	2	2	2	2	0	0	1	1	U	C	6	8	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040014	2	3.6	6.11	2.51	MARCHAGEE TK	East	09-Oct-08	60	1	1	2	2	2	2	2	2	1	1	C	C	10	10	
5040014	3	12.8	16.37	3.57	MARCHAGEE TK	East	09-Oct-08	60	1	1	1	2	2	2	0	0	1	1	C	C	5	6	
5040014	4	16.37	33.04	16.67	MARCHAGEE TK	East	09-Oct-08	60	1	1	2	2	2	2	0	0	1	1	C	C	6	7	
5040014	5	33.04	38.56	5.52	MARCHAGEE TK	East	09-Oct-08	0	1	1	2	2	2	2	0	0	1	1	C	U	8	6	
5040015	1	0	1.1	1.1	AGATON RD	North	01-Oct-08	40	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040015	2	1.1	3.4	2.3	AGATON RD	North	01-Oct-08	40	2	2	1	1	1	0	1	1	2	2	C	C	9	8	
5040015	3	3.4	4.6	1.2	AGATON RD	North	01-Oct-08	40	1	1	1	1	1	1	1	1	2	2	P	P	7	7	
5040015	4	4.6	6	1.4	AGATON RD	North	01-Oct-08	40	1	1	1	1	1	1	2	2	2	2	P	C	8	9	
5040015	5	6	6.78	0.78	AGATON RD	North	01-Oct-08	40	1	1	1	1	1	1	2	2	2	2	P	C	8	9	
5040015	6	6.78	9.6	2.82	AGATON RD	North	01-Oct-08	40	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040015	7	9.6	12	2.4	AGATON RD	North	01-Oct-08	40	1	1	1	1	1	1	2	2	2	2	C	P	9	8	
5040015	8	12	12.5	0.5	AGATON RD	North	01-Oct-08	40	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040015	9	12.5	13.9	1.4	AGATON RD	North	01-Oct-08	40	2	2	1	1	1	1	2	2	2	2	C	C	10	10	
5040015	10	13.9	15.4	1.5	AGATON RD	North	15-Oct-08	40	1	1	1	1	1	1	1	1	2	2	P	S	7	7	
5040015	11	15.4	17.1	1.7	AGATON RD	North	15-Oct-08	40	1	1	1	1	0	1	2	2	1	1	U	C	5	8	
5040015	12	17.1	18.38	1.28	AGATON RD	North	15-Oct-08	40	2	2	1	1	1	1	2	2	2	2	U	S	8	9	
5040015	13	18.38	23.5	5.12	AGATON RD	North	15-Oct-08	40	1	1	1	1	1	1	1	1	2	1	C	C	7	6	
5040015	14	23.5	30.08	6.58	AGATON RD	South	15-Oct-08	20	2	1	2	2	2	2	2	2	2	2	U	U	10	9	
5040016	1	0	2.2	2.2	WADDI RD	West	07-Oct-08	20	2	2	1	1	1	1	2	2	2	2	C	C	10	10	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040016	2	2.2	5.2	3	WADDI RD	West	07-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	C	8	8	
5040016	3	5.2	6	0.8	WADDI RD	West	07-Oct-08	20	2	2	1	1	1	1	1	1	2	2	S	S	8	8	
5040016	4	6	6.9	0.9	WADDI RD	West	07-Oct-08	20	2	2	1	1	1	1	2	2	2	2	S	U	9	8	
5040016	5	6.9	12	5.1	WADDI RD	West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040016	6	12	13.4	1.4	WADDI RD	West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	C	8	9	
5040016	7	13.4	14.3	0.9	WADDI RD	West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040016	8	14.3	14.8	0.5	WADDI RD	West	07-Oct-08	20	2	2	2	2	2	2	2	2	2	2	C	C	12	12	
5040016	9	14.8	15.8	1	WADDI RD	West	07-Oct-08	20	1	1	2	2	1	1	2	2	2	2	C	C	10	10	
5040016	10	15.8	17.95	2.15	WADDI RD	West	07-Oct-08	20	1	1	2	2	1	1	2	2	2	2	U	U	8	8	
5040018	1	0	1.3	1.3	KOOJAN POOL RD	East	06-Oct-08	20	0	0	0	0	1	1	0	0	2	2	S	S	4	4	
5040018	2	1.3	2	0.7	KOOJAN POOL RD	East	06-Oct-08	20	2	2	1	1	1	1	1	1	2	2	U	S	7	8	GLADIOLUS
5040018	3	2	3.7	1.7	KOOJAN POOL RD	East	06-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	S	8	7	GLADIOLUS
5040018	4	3.7	5.5	1.8	KOOJAN POOL RD	East	06-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	U	7	7	GLADIOLUS
5040018	5	5.5	7.57	2.07	KOOJAN POOL RD	East	06-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	C	8	8	GLADIOLUS
5040019	1	0	1.5	1.5	COALARA RD	North	13-Oct-08	20	1	2	1	1	1	1	2	2	2	2	S	S	8	9	
5040019	2	1.5	1.7	0.2	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	S	8	8	
5040019	3	1.7	2.4	0.7	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	
5040019	4	2.4	3.3	0.9	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	S	8	8	
5040019	5	3.3	6.1	2.8	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040019	6	6.1	6.9	0.8	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	P	7	8	
5040019	7	6.9	8	1.1	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	P	7	8	
5040019	8	8	9.3	1.3	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	P	8	8	
5040019	9	9.3	9.8	0.5	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	
5040019	10	9.8	10.2	0.4	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	S	8	8	
5040019	11	10.2	10.5	0.3	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	P	8	8	
5040019	12	10.5	11.2	0.7	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	P	8	8	
5040019	13	11.2	12	0.8	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	U	7	7	
5040019	14	12	12.5	0.5	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	U	8	7	
5040019	15	12.5	13.3	0.8	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	
5040019	16	13.3	14	0.7	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	U	8	7	
5040019	17	14	15.7	1.7	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	
5040019	18	15.7	16.2	0.5	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	1	1	2	2	P	S	7	7	
5040019	19	16.2	18.58	2.38	COALARA RD	North	13-Oct-08	20	1	1	1	1	1	1	1	2	2	2	S	S	7	8	
5040019	20	18.58	28.36	9.78	COALARA RD	North	09-Oct-08	40	1	1	1	1	1	1	2	2	1	1	S	S	7	5	
5040019	21	28.36	37.12	8.76	COALARA RD	North	09-Oct-08	0	1	1	2	2	2	2	2	2	1	1	C	C	9	8	
5040020	1	0	2.3	2.3	BARBERTON WEST RD	North	06-Oct-08	20	1	1	1	0	1	0	1	1	2	0	C	C	8	4	GLADIOLUS
5040020	2	2.3	3.51	1.21	BARBERTON WEST RD	North	06-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	U	8	6	GLADIOLUS
5040020	3	3.51	11.53	8.02	BARBERTON WEST RD	North	06-Oct-08	20	1	1	1	1	1	1	2	2	1	1	C	S	8	7	GLADIOLUS BRIDAL_CREEPER

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040022	1	0	10.3	10.3	YERRAMULLAH RD	North	02-Oct-08	80	1	1	2	2	2	2	2	2	1	1	C	C	10	10	SPINY_RUSH PATERSONS_CURSE
5040022	2	10.3	13.1	2.8	YERRAMULLAH RD	North	02-Oct-08	100	1	1	2	2	2	2	2	0	1	1	C	U	10	6	PATERSONS_CURSE
5040022	3	13.1	16.92	3.82	YERRAMULLAH RD	North	02-Oct-08	100	1	1	2	2	2	2	0	0	1	1	C	C	8	6	
5040022	4	16.91	31.5	14.59	YERRAMULLAH RD	North	02-Oct-08	60	1	1	1	1	1	1	1	1	1	1	C	C	7	7	PATERSONS_CURSE VICTORIAN_TEA_TREE
5040023	6	12	15.9	3.9	MULLERING RD	North	07-Oct-08	20	1	1	1	1	2	2	2	2	2	2	C	C	10	10	
5040023	7	15.9	17.8	1.9	MULLERING RD	North	07-Oct-08	20	1	1	2	2	2	2	2	2	2	2	C	U	11	9	
5040023	8	17.8	19.92	2.12	MULLERING RD	North	07-Oct-08	20	2	2	2	2	2	2	2	2	2	2	C	C	12	11	
5040024	1	0	0.3	0.3	WOLBA RD	West	07-Oct-08	20	0	0	0	0	0	0	0	0	0	0	P	S	1	1	PATERSONS_CURSE
5040024	2	0.3	3.4	3.1	WOLBA RD	West	07-Oct-08	20	0	0	0	0	0	0	0	0	1	1	S	S	2	2	PATERSONS_CURSE
5040024	3	3.4	4.1	0.7	WOLBA RD	West	07-Oct-08	20	1	1	1	1	0	0	0	0	2	2	C	C	6	6	
5040024	4	4.1	5.3	1.2	WOLBA RD	West	07-Oct-08	20	0	0	0	0	0	0	0	0	0	0	C	C	2	2	
5040024	5	5.3	8.4	3.1	WOLBA RD	West	07-Oct-08	20	2	2	1	1	1	1	1	1	2	2	C	C	9	9	
5040025	1	0	4	4	MUNGEDAR RD	North East	07-Oct-08	20	0	0	0	0	1	1	0	0	2	2	C	S	5	4	
5040025	2	4	4.3	0.3	MUNGEDAR RD	North East	07-Oct-08	20	1	1	1	1	1	1	0	0	2	2	C	S	7	6	
5040025	3	4.3	6.7	2.4	MUNGEDAR RD	North East	07-Oct-08	20	0	0	0	0	0	0	0	0	2	2	C	S	4	3	
5040025	4	6.7	7.84	1.14	MUNGEDAR RD	North East	07-Oct-08	20	1	0	1	0	1	0	0	0	2	2	C	S	7	3	
5040026	1	0	4.4	4.4	KOONAH RD	West	07-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	S	8	7	
5040026	2	4.4	7.5	3.1	KOONAH RD	West	07-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	S	8	7	
5040026	3	7.5	11.3	3.8	KOONAH RD	West	07-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	C	8	8	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040026	4	11.3	12.1	0.8	KOONAH RD	West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	C	7	9	
5040026	5	12.1	14.6	2.5	KOONAH RD	West	07-Oct-08	20	1	1	2	2	1	1	2	2	2	2	C	P	10	9	
5040028	1	0	6.7	6.7	NAMMEGARRA RD	North West	01-Oct-08	0	1	1	1	1	2	2	2	2	1	1	C	S	9	8	PATERSONS_CURSE GLADIOLUS
5040030	1	0	2.5	2.5	MUTHAWANDERY RD	South	07-Oct-08	20	1	1	2	2	1	1	2	2	2	2	C	C	10	10	SPINY_RUSH
5040030	2	2.5	2.9	0.4	MUTHAWANDERY RD	South	07-Oct-08	20	2	2	1	1	1	1	1	1	2	2	C	C	9	9	SPINY_RUSH
5040030	3	2.9	4.4	1.5	MUTHAWANDERY RD	South	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	C	7	9	
5040030	4	4.4	7.6	3.2	MUTHAWANDERY RD	South	07-Oct-08	20	1	1	1	1	1	1	1	1	2	2	U	C	6	8	
5040030	5	7.6	10.1	2.5	MUTHAWANDERY RD	South	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	U	P	7	8	
5040030	6	10.1	11.5	1.4	MUTHAWANDERY RD	South	07-Oct-08	20	1	1	1	1	0	0	2	2	2	2	C	P	8	7	
5040030	7	11.5	12.6	1.1	MUTHAWANDERY RD	South	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	U	9	7	
5040030	8	12.6	14.3	1.7	MUTHAWANDERY RD	South	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040030	9	14.3	15	0.7	MUTHAWANDERY RD	South	07-Oct-08	20	0	0	0	0	0	0	0	0	0	0	C	C	2	2	
5040030	10	15	15.9	0.9	MUTHAWANDERY RD	South	07-Oct-08	20	0	1	0	1	0	1	0	2	0	2	C	C	2	9	
5040030	11	15.9	16.76	0.86	MUTHAWANDERY RD	South	07-Oct-08	20	2	2	2	0	1	1	2	2	2	2	U	C	9	9	
5040032	1	0	2.2	2.2	COOMBERDALE WEST RD	East	01-Oct-08	20	2	2	1	1	1	1	1	1	2	2	S	S	8	8	
5040032	2	2.2	2.8	0.6	COOMBERDALE WEST RD	East	01-Oct-08	20	1	1	1	1	1	1	1	1	2	2	U	C	6	7	
5040032	3	2.8	3.9	1.1	COOMBERDALE WEST RD	East	01-Oct-08	20	1	1	1	1	1	1	1	1	1	1	C	C	7	7	
5040032	4	3.9	4.6	0.7	COOMBERDALE WEST RD	East	01-Oct-08	20	1	1	0	0	1	1	0	0	1	1	C	C	5	5	
5040032	5	4.6	5.5	0.9	COOMBERDALE WEST RD	East	01-Oct-08	20	1	1	1	1	0	0	0	0	1	1	S	U	4	3	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040032	6	5.5	8.8	3.3	COOMBERDALE WEST RD	East	01-Oct-08	20	1	1	1	1	1	1	0	1	1	1	C	S	6	6	BONESEED
5040032	7	8.8	10.92	2.12	COOMBERDALE WEST RD	East	01-Oct-08	20	1	1	1	1	1	1	1	1	1	1	C	S	7	6	
5040033	1	0	1.6	1.6	MINYULO RD	North West	07-Oct-08	20	1	2	1	1	0	0	1	1	2	2	S	S	6	7	
5040033	2	1.6	4.5	2.9	MINYULO RD	North West	07-Oct-08	20	0	1	0	0	0	0	0	0	2	2	C	C	4	5	
5040033	3	4.5	5.2	0.7	MINYULO RD	North West	07-Oct-08	20	1	1	1	1	1	1	1	1	2	2	P	C	7	8	
5040033	4	5.2	8.8	3.6	MINYULO RD	North West	07-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	PATERSONS_CURSE
5040034	1	0	4.5	4.5	KAYANABA RD	West	08-Oct-08	20	0	0	0	0	0	0	0	0	0	0	S	S	1	1	
5040034	2	4.5	6	1.5	KAYANABA RD	West	08-Oct-08	20	0	0	0	0	0	0	0	0	0	0	C	S	2	1	
5040034	3	6	6.8	0.8	KAYANABA RD	West	08-Oct-08	20	0	1	0	1	0	1	0	0	0	2	C	S	2	6	
5040034	4	6.8	9.2	2.4	KAYANABA RD	West	08-Oct-08	20	0	1	0	1	0	1	0	0	0	2	C	P	2	6	
5040034	5	9.2	11.7	2.5	KAYANABA RD	West	08-Oct-08	20	0	0	0	0	0	0	0	0	1	1	C	C	2	2	
5040034	6	11.7	14.65	2.95	KAYANABA RD	West	08-Oct-08	20	0	0	0	0	0	0	0	0	0	0	C	C	2	2	
5040034	7	14.65	15	0.35	KAYANABA RD	West	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	U	8	6	
5040034	8	15	16.8	1.8	KAYANABA RD	West	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	U	C	6	8	
5040034	9	16.8	18.4	1.6	KAYANABA RD	West	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	C	8	8	
5040035	1	0	15.1	15.1	COWALLA RD	West	02-Oct-08	40	1	1	0	1	2	2	2	2	1	1	P	C	7	9	PATERSONS_CURSE
5040037	1	0	4	4	NAMBAN WEST RD	East	13-Oct-08	20	1	1	2	1	2	1	2	2	2	2	U	U	9	7	
5040037	2	4	5.4	1.4	NAMBAN WEST RD	East	13-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	
5040038	1	0	8.5	8.5	BOOTHENDARRA RD	East	09-Oct-08	40	1	1	1	1	1	1	0	0	1	1	C	C	5	5	GLADIOLUS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040038	2	11.5	14	2.5	BOOTHENDARRA RD	East	09-Oct-08	0	1	1	1	1	2	2	0	0	1	1	C	C	7	7	
5040040	1	0	12.5	12.5	MCKAYS RD	North	09-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	S	8	7	
5040042	1	0	14.4	14.4	DEWAR RD	South	09-Oct-08	40	1	1	1	1	1	1	1	1	1	1	C	C	6	6	
5040043	1	0	2.3	2.3	YANDAN RD	West	08-Oct-08	20	1	1	0	0	0	0	2	2	2	2	S	S	6	6	SPINY_RUSH
5040043	2	2.3	4.2	1.9	YANDAN RD	West	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	S	S	7	7	SPINY_RUSH
5040043	3	4.2	5.8	1.6	YANDAN RD	West	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	S	8	8	SPINY_RUSH GLADIOLUS
5040043	4	5.8	8.4	2.6	YANDAN RD	West	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	U	8	7	GLADIOLUS
5040043	5	8.4	9.5	1.1	YANDAN RD	West	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	U	8	7	GLADIOLUS
5040043	6	9.5	12.08	2.58	YANDAN RD	West	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	C	8	8	GLADIOLUS
5040045	1	0	5.8	5.8	WANDAWALLAH RD	East	14-Oct-08	20	1	1	0	0	0	0	0	0	0	0	S	S	2	2	
5040045	2	5.8	9	3.2	WANDAWALLAH RD	East	14-Oct-08	20	1	1	1	1	0	0	1	1	1	1	S	S	5	5	
5040045	3	9	10.5	1.5	WANDAWALLAH RD	East	14-Oct-08	20	1	1	1	1	1	1	1	1	1	1	S	P	6	6	
5040045	4	10.5	11.2	0.7	WANDAWALLAH RD	East	14-Oct-08	20	1	1	1	1	1	1	1	1	1	1	S	S	6	6	
5040045	5	11.2	12.2	1	WANDAWALLAH RD	East	14-Oct-08	20	1	1	1	1	1	1	1	1	1	1	S	P	6	6	
5040045	6	12.2	14.1	1.9	WANDAWALLAH RD	East	14-Oct-08	20	1	1	1	1	1	1	1	1	1	1	P	U	6	5	
5040045	7	14.1	16.26	2.16	WANDAWALLAH RD	East	14-Oct-08	20	1	0	1	0	1	0	1	2	1	0	S	S	6	3	
5040046	1	0	0.8	0.8	CAPITELA RD	South	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	U	9	7	
5040046	2	0.8	1.6	0.8	CAPITELA RD	South	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	C	C	9	9	
5040046	3	1.6	2.4	0.8	CAPITELA RD	South	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	P	8	8	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040046	4	2.4	3	0.6	CAPITELA RD	South	08-Oct-08	20	1	1	1	1	1	1	2	2	2	2	P	C	8	9	
5040046	5	3	4.7	1.7	CAPITELA RD	South	08-Oct-08	20	1	1	1	1	2	2	2	2	2	2	U	S	8	10	
5040046	6	4.7	6	1.3	CAPITELA RD	South	08-Oct-08	20	2	2	2	2	2	2	2	2	2	2	S	U	11	10	GLADIOLUS
5040046	7	6	6.7	0.7	CAPITELA RD	South	08-Oct-08	20	0	0	1	1	1	1	1	1	2	2	S	S	6	6	GLADIOLUS
5040046	8	6.7	9.26	2.56	CAPITELA RD	South	08-Oct-08	20	1	1	0	0	1	1	1	1	2	2	S	S	6	6	GLADIOLUS
5040049	1	0	1	1	GOONDERDOO RD	West	12-Oct-08	20	0	0	0	0	0	0	0	0	0	0	C	C	2	2	
5040049	2	1	5	4	GOONDERDOO RD	West	12-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	C	8	8	
5040050	1	0	9.9	9.9	CANTABILLING RD	West	02-Oct-08	20	2	1	1	1	2	2	2	2	1	1	C	C	8	9	PATERSONS_CURSE
5040050	2	9.9	12.2	2.3	CANTABILLING RD	West	02-Oct-08	20	1	1	1	1	1	1	2	2	1	1	C	C	6	7	SPINY_RUSH CAPE_TULIP
5040050	3	12.2	13.2	1		West	02-Oct-08	20	0	1	1	1	1	1	2	2	1	1	C	C	6	6	CAPE_TULIP
5040050	4	13.2	15.68	2.48	CANTABILLING RD	West	02-Oct-08	20	1	1	1	1	2	2	2	2	1	1	C	C	8	8	CAPE_TULIP
5040050	5	15.68	16.8	1.12	CANTABILLING RD	West	02-Oct-08	20	1	1	1	1	1	1	2	2	1	1	C	C	6	6	CAPE_TULIP SPINY_RUSH
5040050	6	16.8	29.5	12.7	CANTABILLING RD	West	02-Oct-08	20	1	1	1	1	2	2	2	2	1	2	C	C	8	9	PATERSONS_CURSE
5040050	7	29.5	30.1	0.6	CANTABILLING RD	West	02-Oct-08	20	1	1	1	1	2	2	0	0	2	1	U	S	6	6	
5040051	1	0	8.4	8.4	COCKLESHELL GULLY RD	North	26-Sep-08	60	2	2	2	2	2	2	0	2	1	1	C	C	9	11	PATERSONS_CURSE
5040051	2	8.4	13.8	5.4	COCKLESHELL GULLY RD	North	26-Sep-08	60	2	2	2	2	2	2	0	0	1	1	U	U	7	7	PATERSONS_CURSE
5040051	3	13.8	19.6	5.8	COCKLESHELL GULLY RD	North	26-Sep-08	100	2	2	2	2	2	2	0	0	1	1	U	U	7	7	
5040052	1	0	6	6	BLACK ARROW RD	South	02-Oct-08	20	2	2	0	0	1	1	0	0	2	2	S	U	6	5	PATERSONS_CURSE
5040052	2	6	8.7	2.7	BLACK ARROW RD	South	02-Oct-08	20	1	1	2	2	2	2	2	0	1	2	C	C	9	7	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040055	1	0	0.9	0.9	STRATHMORE RD	South West	07-Oct-08	20	2	2	1	1	1	1	1	1	2	2	S	S	8	8	
5040057	1	0	2.8	2.8	KOLBURN RD	South	01-Oct-08	20	1	1	1	1	1	1	0	0	2	2	C	C	7	7	SPINY_RUSH
5040057	2	2.8	3	0.2	KOLBURN RD	South	01-Oct-08	20	1	1	1	1	0	0	0	0	2	2	S	S	5	5	SPINY_RUSH
5040059	1	0	2.7	2.7	BIDGERABBIE RD	West	14-Oct-08	20	1	1	0	0	0	0	0	0	0	0	S	S	2	2	
5040059	2	2.7	5.3	2.6	BIDGERABBIE RD	West	14-Oct-08	20	1	1	1	1	1	1	1	1	1	1	S	S	6	6	
5040059	3	5.3	6.16	0.86	BIDGERABBIE RD	West	14-Oct-08	20	1	1	0	0	0	0	0	0	0	0	S	S	2	2	
5040060	1	0	3.24	3.24	WALYOO RD	West	06-Oct-08	20	1	1	1	1	0	0	0	0	2	2	C	S	6	5	
5040060	2	3.24	5.33	2.09	WALYOO RD	South	06-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	S	8	7	GLADIOLUS
5040062	1	0	11.4	11.4	WONGONDERRAH RD	West	02-Oct-08	0	1	1	2	2	2	2	2	2	1	1	C	C	8	8	
5040062	2	11.4	22.94	11.54	WONGONDERRAH RD	West	02-Oct-08	0	1	1	2	2	2	2	2	2	1	1	U	S	8	9	CAPE_TULIP
5040065	1	0	1	1	CANOVER RD	West	04-Oct-08	100	1	1	2	2	2	2	2	2	2	2	U	U	9	9	
5040065	2	1	3.4	2.4	CANOVER RD	West	04-Oct-08	100	1	1	2	2	2	2	2	2	2	0	U	S	9	8	
5040065	3	3.4	3.6	0.2	CANOVER RD	West	04-Oct-08	100	1	1	2	2	2	2	2	2	2	2	U	U	9	9	
5040065	4	3.6	4.3	0.7	CANOVER RD	West	04-Oct-08	100	2	2	2	2	2	2	2	2	2	1	U	S	10	10	
5040065	5	4.3	8.3	4	CANOVER RD	West	04-Oct-08	100	2	2	2	2	2	2	2	2	2	2	U	U	10	10	
5040079	1	0	3.45	3.45	CAIRN RD	West	02-Oct-08	20	1	1	1	1	1	1	2	0	1	1	U	U	6	4	PATERSONS_CURSE
5040080	1	0	3.6	3.6	NAMBUNG RD	West	02-Oct-08	0	1	1	2	2	2	2	2	2	1	1	U	U	8	8	
5040090	1	0	2.1	2.1	WOOLKA RD	North West	02-Oct-08	60	1	1	1	1	2	2	0	0	1	1	U	U	5	5	
5040091	1	0	4.79	4.79	MOOCHAMULLA RD	South	30-Sep-08	20	1	1	1	1	1	1	0	0	2	2	S	S	6	6	GLADIOLUS

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040091	2	4.79	10.3	5.51	MOOCHAMULLA RD	South	30-Sep-08	20	2	2	2	1	1	1	2	2	2	2	P	U	9	9	GLADIOLUS
5040092	1	0	1.2	1.2	WINJA RD	North	02-Oct-08	40	1	1	1	1	2	2	2	2	1	1	U	U	7	7	SPINY_RUSH
5040092	2	1.2	4.6	3.4	WINJA RD	North	02-Oct-08	40	1	1	1	1	2	2	2	2	1	1	S	S	8	8	SPINY_RUSH PATERSONS_CURSE CAPE_TULIP
5040120	1	0	3.5	3.5	KOODJEE RD	North	06-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	GLADIOLUS BRIDAL_CREEPER
5040120	2	3.5	7.3	3.8	KOODJEE RD	North	06-Oct-08	20	1	1	1	1	1	1	2	2	2	2	S	S	8	8	GLADIOLUS BRIDAL_CREEPER PATERSONS_CURSE
5040120	3	7.3	8.7	1.4	KOODJEE RD	East	06-Oct-08	20	1	1	0	1	1	1	2	2	2	2	S	P	7	8	GLADIOLUS PATERSONS_CURSE
5040121	1	0	2.18	2.18	COWALLA PEAK RD	West	02-Oct-08	40	1	1	1	1	2	2	0	0	1	1	C	C	7	7	SPINY_RUSH
5040122	1	0	4.58	4.58	caro rd	West	01-Oct-08	20	1	1	0	0	0	0	2	2	0	0	S	S	4	4	PATERSONS_CURSE
5040125	1	0	1.3	1.3	WARRO RD	North	09-Oct-08	0	1	1	1	1	2	2	0	0	2	1	C	C	6	7	
5040125	2	1.3	10.5	9.2	WARRO RD	North	09-Oct-08	0	1	1	2	2	1	1	0	0	2	2	C	C	6	7	
5040126	1	0	0.9	0.9	DINNER HILL RD	South	12-Oct-08	20	1	1	1	1	1	1	1	1	2	2	C	S	8	7	
5040126	2	0.9	3.8	2.9	DINNER HILL RD	South	12-Oct-08	20	0	0	0	0	0	0	0	0	0	1	C	C	2	3	
5040126	3	3.8	4.3	0.5	DINNER HILL RD	South	12-Oct-08	20	0	0	0	0	0	0	0	0	0	0	C	C	2	2	
5040126	4	4.3	4.6	0.3	DINNER HILL RD	South	12-Oct-08	20	1	1	1	1	1	1	1	1	1	1	C	C	7	7	
5040126	5	4.6	5	0.4	DINNER HILL RD	South	12-Oct-08	20	2	2	1	1	1	1	1	1	2	2	U	U	7	7	
5040126	6	5	5.7	0.7	DINNER HILL RD	South	12-Oct-08	20	1	1	1	0	1	0	0	0	2	2	S	U	6	3	
5040126	7	5.7	6.61	0.91	DINNER HILL RD	South	12-Oct-08	20	2	0	1	0	1	0	0	0	2	0	S	S	7	1	
5040127	1	0	7.5	7.5	SANDY POINT CAPE RD	West	02-Oct-08	100	1	1	2	2	2	2	2	2	1	1	U	U	8	8	BONESEED

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040130	1	0	3.6	3.6	MENARDIE RD	North	08-Oct-08	20	1	0	0	0	0	0	0	0	2	1	S	S	4	2	PATERSONS_CURSE
5040131	1	0	0.5	0.5	LUPIN VALLEY RD	South West	08-Oct-08	20	1	1	2	1	1	1	2	2	2	2	U	C	8	9	
5040131	2	0.5	1.3	0.8	LUPIN VALLEY RD	South West	08-Oct-08	20	1	1	2	2	2	2	2	2	1	2	U	U	8	9	
5040131	3	1.3	2.9	1.6	LUPIN VALLEY RD	South West	08-Oct-08	20	1	1	1	2	1	1	2	2	2	2	S	S	8	9	
5040131	4	2.9	4.4	1.5	LUPIN VALLEY RD	South West	08-Oct-08	20	2	2	1	1	1	1	1	0	2	2	S	S	8	7	
5040131	5	4.4	7.1	2.7	LUPIN VALLEY RD	South West	08-Oct-08	20	1	1	1	1	1	1	1	1	2	2	S	S	7	7	
5040131	6	7.1	9.06	1.96	LUPIN VALLEY RD	South West	08-Oct-08	20	2	2	1	1	1	1	1	1	2	2	C	C	9	9	
5040132	1	0	2	2	BANOVICH RD	North	04-Oct-08	80	2	2	2	2	2	2	2	2	2	2	U	U	10	10	
5040132	2	2	3.1	1.1	BANOVICH RD	North	04-Oct-08	80	1	1	1	1	2	2	2	2	1	1	U	U	7	7	
5040132	3	3.1	5.66	2.56	BANOVICH RD	North	04-Oct-08	80	1	1	2	2	2	2	2	2	2	2	U	U	9	9	
5040142	1	0	2	2	WATHINGARRA RD	South	12-Oct-08	20	1	1	1	1	1	1	1	1	0	0	S	S	5	5	
5040142	2	2	7.4	5.4	WATHINGARRA RD	South	12-Oct-08	20	0	0	0	0	0	0	1	0	0	0	S	S	2	1	
5040142	3	7.4	8.56	1.16	WATHINGARRA RD	South	12-Oct-08	20	2	2	1	1	1	1	1	1	2	2	S	U	8	7	
5040163	1	0	3.4	3.4	SCENIC DR	North	30-Sep-08	20	1	1	1	1	0	0	0	0	2	2	S	S	5	5	GLADIOLUS
5040163	2	3.4	7.89	4.49	SCENIC DR	North	30-Sep-08	20	1	1	1	1	0	0	0	0	2	2	S	S	5	5	GLADIOLUS
5040189	1	0	3.51	3.51	MAZZA RD	North	09-Oct-08	60	1	1	1	1	1	1	0	0	1	1	C	C	6	6	
5040220	1	0	5.4	5.4	NYLAGARDA RD	North	02-Oct-08	100	1	1	2	2	2	2	2	2	1	1	U	U	8	8	
5040227	1	0	17.4	17.4	MUNBINEA RD	North	02-Oct-08	40	1	1	1	1	2	0	2	2	1	1	C	C	9	7	
5040228	1	0	1.45	1.45	FRED WESTON RD	South East	02-Oct-08	20	1	1	1	1	1	1	0	0	1	1	C	U	6	4	

Road#	Sect#	OD Start	OD Finish	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
5040247	1	0	16.7	16.7	INDIAN OCEAN DR NORTH	North	02-Oct-08	0	1	1	2	2	2	2	2	2	1	1	C	C	8	8	
5040249	1	0	4.1	4.1	WOODBINE RD	North	30-Sep-08	20	0	2	0	1	0	1	1	1	0	2	C	U	3	7	GLADIOLUS
5040249	2	4.1	5.1	1	WOODBINE RD	North	30-Sep-08	20	1	1	1	1	0	1	1	1	0	2	C	U	5	6	GLADIOLUS
5040249	3	5.1	6.66	1.56	WOODBINE RD	North	30-Sep-08	20	1	2	0	2	0	1	2	2	0	2	C	C	5	11	GLADIOLUS
5040249	4	6.66	7.9	1.24	WOODBINE RD	East	30-Sep-08	20	1	1	1	1	2	2	2	2	2	2	U	S	8	9	GLADIOLUS
5040249	5	7.9	9.6	1.7	WOODBINE RD	North East	30-Sep-08	20	1	1	2	2	2	2	2	2	2	2	U	U	9	9	GLADIOLUS PATERSONS_CURSE
5040254	1	0	22.4	22.4	INDIAN OCEAN DR SOUTH	North West	02-Oct-08	0	1	2	2	1	2	2	2	2	1	1	U	U	8	8	
5040255	1	0	0.9	0.9	JAM HILL RD	South	08-Oct-08	20	1	0	0	0	1	0	1	0	2	0	C	S	7	1	
5040261	1	0	2.55	2.55	SPRINGHILL RD	East	02-Oct-08	20	1	1	0	0	0	0	2	2	0	0	C	C	5	5	CAPE_TULIP SPINY_RUSH

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 Dandaragan

(Source: Main Roads WA 2009)

Road Number	Road Name	Road length (km)
5040001	CATABY RD	16.83
5040002	DANDARAGAN RD	58.96
5040004	MUNBINEA RD	13.57
5040005	NORTH WEST RD	49.16
5040006	BADGINGARRA RD	32.4
5040007	ROWES RD	41.54
5040008	WATHEROO RD	39.26
5040009	CADDA RD	26.37
5040010	GILLINGARRA RD	26.8
5040011	DAMBADGIE RD	14.96
5040012	MCNAMARA RD	8.23
5040013	WINJARDIE RD	9.04
5040014	MARCHAGEE TK	38.56
5040015	AGATON RD	30.08
5040016	WADDI RD	17.95
5040018	KOOJAN POOL RD	7.57
5040019	COALARA RD	37.12
5040020	BARBERTON WEST RD	11.53
5040021	BOUNDARY RD	3.53
5040022	YERRAMULLAH RD	31.15
5040023	MULLERING RD	19.92
5040024	WOLBA RD	8.4
5040025	MUNGEDAR RD	7.85
5040026	KOONAH RD	14.6
5040027	MIMEGARRA RD	24.85
5040028	NAMMEGARRA RD	6.55
5040029	BEACON RD	6.2
5040030	MUTHAWANDERY RD	16.76
5040032	COOMBERDALE WEST RD	18.24
5040033	MINYULO RD	5.74
5040034	KAYANABA RD	18.4
5040035	COWALLA RD	15
5040037	NAMBAN WEST RD	11.4
5040038	BOOTHENDARRA RD	32.57
5040040	MCKAYS RD	12.38
5040042	DEWAR RD	14.22
5040043	YANDAN RD	12.08
5040044	SALT LAKE RD	2.34
5040045	WANDAWALLAH RD	17.51
5040046	CAPITELA RD	18.39
5040047	CANTABILLING RD	8.02
5040048	COOLJARLOO RD	11.8
5040049	GOONDERDOO RD	5.18
5040050	CANTABILLING RD	30.1
5040051	COCKLESHELL GULLY RD	18.85
5040052	BLACK ARROW RD	8.68
5040053	GREY RD (NP)	30.42
5040055	STRATHMORE RD	9.62
5040056	ERAGILGA RD	1.52
5040057	KOLBURN RD	3.84
5040058	WALYERING RD	12.72
5040059	BIDGERABBIE RD	6.16
5040060	WALYOO RD	5.33
5040062	WONGONDERRAH RD	22.94
5040063	WEDGE ISLAND RD	13.2
5040064	BOOTOO RD	22.25
5040065	CANOVER RD	13.51
5040066	HAMERSLEY ST	0.55
5040067	LINDSAY ST	0.34

5040068	WHITFIELD RD	0.61
5040069	CAMERON ST	0.39
5040070	SANDLAND ST	0.29
5040071	BATT ST	0.14
5040072	MURRAY ST	0.23
5040073	ROBERTS ST	0.33
5040074	WHITE ST	0.28
5040075	COOK ST	0.28
5040076	GRIGSON ST	0.71
5040077	PADBURY ST	0.56
5040078	BASHFORD ST	1.11
5040079	CAIRN RD	3.45
5040080	NAMBUNG RD	3.48
5040081	STOCKYARD RD	2.75
5040082	TOPHAM ST	0.15
5040083	HARRIS ST	0.1
5040084	BOWMAR PL	0.09
5040086	QUIN PL	0.12
5040087	CAMM RD	0.97
5040088	HARRIS ST	1.78
5040089	DARCH ST	0.05
5040090	WOOLKA RD	11.05
5040091	MOOCHAMULLA RD	10.11
5040092	WINJA RD	4.54
5040093	DOUST ST	0.49
5040094	BOWER ST	0.59
5040095	HASTING ST	0.76
5040097	DALTON ST	0.55
5040098	HILL ST	0.09
5040099	BLUEWATER DR	0.39
5040100	HAWAII RD	0.19
5040101	TAHITI PL	0.14
5040102	SHINGLE AV	0.35
5040104	CATALONIA ST	0.84
5040105	ARAGON ST	0.8
5040106	TALAVERA RD	0.48
5040107	CORUNNA RD	0.68
5040108	YORK ST	0.11
5040109	DRUMMOND CIR	1.1
5040110	DRUMMOND WY	0.25
5040111	LEON ST	0.11
5040112	WESTON ST	0.58
5040113	SEVILLE ST	1.57
5040114	LANG ST	0.13
5040115	IBERIA ST	0.72
5040116	CADIZ ST	0.19
5040117	MEAGHER DR	0.95
5040118	REIMERS ST	0.52
5040119	LANG ST	0.22
5040120	KOODJEE RD	8.75
5040121	COWALLA PEAK RD	2.18
5040122	CARO RD	4.58
5040123	CHELSEA RD	3.39
5040124	WARD ST	0.57
5040125	WARRO RD	10.37
5040126	DINNER HILL RD	9.6
5040127	SANDY POINT CAPE RD	7.4
5040128	HEATON ST	0.52
5040129	MAHOMET RD	2.43
5040130	MENARDIE RD	2.77
5040131	LUPIN VALLEY RD	9.06
5040132	BANOVICH RD	5.86
5040133	ROWE ST	0.11
5040136	PASSMORE CL	0.19
5040137	WHITBURN PL	0.18
5040138	WESTLAKE WY	0.23

5040139	HEITMAN CL	0.15
5040140	WALYER WALYER RD	4.3
5040141	CATABY RD	2.72
5040142	WATHINGARRA RD	8.56
5040143	GOLF DR	1.07
5040144	BUTLER ST	0.15
5040145	WHITE DR	0.23
5040146	DODD ST	0.21
5040147	CARMELLA ST	0.64
5040148	AIRSTRIP RD	7.06
5040149	COUBROUGH PL	0.33
5040150	ANDREWS ST	0.18
5040151	SANDPIPER ST	0.33
5040152	CORDOBA WY	0.69
5040153	LERIDA WY	0.18
5040154	VALENCIA RD	0.71
5040156	ALVA WY	0.18
5040157	MAJORCA ST	0.12
5040158	BROWN ST	0.54
5040159	TAGUS ST	0.09
5040160	TOLEDO ST	0.13
5040161	MADRID ST	0.09
5040162	GREEN ST	0.15
5040163	SCENIC DR	7.89
5040165	AQUILLA ST	0.44
5040166	WHITLOCK LOOP	0.27
5040167	ESSEX ST	0.11
5040168	UNNAMED RD	0.62
5040169	HERSCHELL RD	2.75
5040170	BROCKMAN CT	0.09
5040171	PINNACLES DR (NP)	17.29
5040173	DORCAS DR	0.22
5040174	VERTICORDIA PL	0.39
5040175	FAVOURITE CL	0.17
5040176	SHELLEY CL	0.11
5040177	CORMORANT CR	0.13
5040178	ELIZABETH WY	0.36
5040179	EVRO ST	0.11
5040180	SEAWARD DR	1.37
5040181	CASUARINA CR	0.62
5040182	BARCELONA DR	0.54
5040183	CASTILLA WY	0.17
5040184	SIERRA CT	0.07
5040185	SEGOVIA AV	0.23
5040186	SANTANDER WY	0.4
5040187	MALAGA CT	0.21
5040188	YORK ST	0.24
5040189	MAZZA RD	3.51
5040190	MEMORIAL DR	0.5
5040191	HARBOUR DR	0.75
5040192	ECHERO MEWS	0.18
5040193	KARLEEN L	0.24
5040194	SONOMA COVE	0.05
5040195	CURLEW PL	0.08
5040196	BATAVIA WY	0.27
5040197	VILLARET WY	0.21
5040198	ACKLAND ST	0.14
5040200	GANNET WY	0.11
5040201	SHEARWATER DR	0.62
5040202	AVOCET ST	0.11
5040203	BREAKWATER DR	0.41
5040204	BAUBIN ST	0.2
5040205	LESUEUR DR	1.77
5040206	OSPREY CL	0.08
5040207	BOULLANGER WY	0.27
5040208	BAYLISS ST	0.18

5040209	BRADLEY LOOP	1
5040210	GAZELEY WY	0.1
5040211	GERONA PL	0.07
5040212	PICASSO PL	0.19
5040213	DOURO CL	0.1
5040214	SANCHEZ CT	0.08
5040215	GRANADA CLADE	0.07
5040216	GOYA MEWS	0.04
5040217	BALBOA COVE	0.04
5040218	HUELVA PL	0.07
5040219	CORTES RTT	0.09
5040220	NYLAGARDA RD	5.29
5040221	LITTLE NYLAGARDA RD	0.5
5040222	VINE COTTAGE L	1.17
5040223	LE SUEUR DR	0.63
5040224	MC CANN ST	0.3
5040225	BAYVIEW CT	0.05
5040226	HANSEN BAY RD	2.21
5040227	MUNBINEA RD	17.11
5040228	FRED WESTON RD	1.45
5040229	KOORINGAL VALE	0.36
5040230	CORELLA LOOP	0.5
5040231	TERN WY	0.2
5040232	ACACIA CT	0.09
5040233	PROTON PL	0.09
5040234	MANIKA GDNS	0.09
5040235	PINETREE CCT	0.35
5040236	MARRIDALE RD	1.76
5040237	EUCALYPT WY	0.64
5040238	SHEOAK GR	0.13
5040239	SEAWARD DR CT	0.04
5040240	MALLEE CL	0.11
5040241	COALSEAM RD	0.54
5040242	GYPSUM ST	0.45
5040243	LIMESTONE WY	0.71
5040244	ZIRCON ST	0.24
5040245	CAMBEWARRA DR	2.92
5040246	GERONIMO CR	2.52
5040247	INDIAN OCEAN DR NORTH	16.64
5040248	AVIS CT	0.19
5040249	WOODBINE RD	9.6
5040251	JURIEN BAY VSTA	5.26
5040252	OCEAN VIEW DR	1.56
5040253	FLYING FOAM WY	1.62
5040254	INDIAN OCEAN DR SOUTH	22.6
5040255	JAM HILL RD	0.92
5040256	ZENDORA DR	3.86
5040257	MIDAS PL	0.3
5040258	RIVER LOOP	2.59
5040259	UNNAMED RD # 259	0.05
5040260	MELALEUCA WY	0.23
5040261	SPRINGHILL RD	2.55
5040262	HILL RIVER VIEW	1.09
5040263	WREN WY	1.72
5040264	LIPIZZAN L	0.21
5040265	ESTELLA PL	0.15
5040266	PARKES L	0.2
5040267	NINETEENTH AV	0.21
5040268	GREVILLEA WY	0.2
5040269	MIDDLETON BVD	0.64
5040270	UNNAMED "A"	0.08
5040271	MOSMAN PDE	0.05
5040272	BREMER PDE	0.05
5040273	HAMELIN AV	0.58
5040274	CRUSOE CR	0.52
5040275	LILY WY	0.15

5040276	PEACEFUL BAY PDE	0.21
5040277	EDEN WY	0.11
5040278	DRYANDRA BVD	0.57
5040279	BORONIA TURN	0.43
5040280	SKUA WY	0.1
5040281	MEELUP DR	0.55
5040282	BATHERS WY	0.18
5040283	GEORDIE WY	0.19
5040284	TWILIGHT DR	0.19
5040285	LITTLE LAGOON WY	0.17
5040286	PARAKEET BEND	0.34
5040287	NEMCIA WY	0.16
5040288	CALADENIA WY	0.29
5040289	BETTONG AV	0.61
5040290	BEACHRIDGE DR	0.83
5040291	APIUM WY	0.36
5040292	ADRIANA PDE	0.65
5040293	DROSERA WY	0.44
5040294	PREMIER DR	2.13
5040295	BELINDA LOOP	1.55
5040296	EMMA CT	0.5
5040297	EMMA CT "A"	0.1
5040298	SULINA CR	1.85
5040299	RIDGE WY	4.14
5040300	TRIG POINT DR	1
5040301	VALLEY VIEW	1.12
5040302	HILL RIVER VIEW "A"	0.32
5040303	MOLAH HILL LOOKOUT RD	0.9
5040304	MARINE DR	1.09
5040305	HOMESTEAD LOOP	1.57
5040306	OCEANIC WY	0.43
5040307	SEA EAGLE CT	0.05
5040308	ISLAND DR	0.26
5040309	TURQUOISE L	0.15
5040310	UNNAMED "B"	2.55
5040311	MERMAID COVE	0.12

Appendix

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APPENDIX 4

Flora species in the Shire of Dandaragan (Source: W.A Herbarium)

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

Acacia applanata
Acacia bartleana
Acacia brumalis
Acacia ericifolia
Acacia ligustrina
Acacia rostellifera
Acacia rostellifera x xanthina
Acacia sp.Tootbardie Road (B.R.Maslin 8204)
Acacia trigonophylla
Acacia willdenowiana
Acacia acuminata
Acacia alata var. *tetrantha*
Acacia applanata
Acacia auronitens
Acacia barbinervis subsp. *borealis*
Acacia bartleana
Acacia benthamii **P2**
Acacia blakelyi
Acacia brumalis
Acacia carens **P2**
Acacia clydonophora
Acacia coolgardiensis
Acacia costata
Acacia cummingiana **P3**
Acacia cyclops
Acacia daphnifolia
Acacia dilatata
Acacia drewiana subsp*. drewiana*
Acacia drummondii subsp*. drummondii*
Acacia epacantha **P3**
Acacia ericifolia
Acacia erinacea
Acacia fagonioides
Acacia flabellifolia **P3**
Acacia forrestiana **R**
Acacia fragilis
Acacia gibbosa
Acacia heteroneura var. *jutsonii*
Acacia huegelii
Acacia idiomorpha
Acacia incrassata
Acacia lasiocarpa
Acacia lasiocarpa
Acacia lasiocarpa var. *bracteolata*
Acacia lasiocarpa var. *lasiocarpa*
Acacia lasiocarpa var*. lasiocarpa* **P2**
Acacia lasiocarpa var. *sedifolia*
Acacia latipes
Acacia latipes subsp. *latipes*
Acacia leptospermoides subsp. *leptospermoides*
Acacia ligustrina
Acacia lullfitziorum
Acacia microbotrya
Acacia moirii subsp. *recurvistipula*
Acacia multispicata
Acacia obovata
Acacia oxyclada
Acacia plicata **P3**
Acacia pulchella var. *glaberrima*
Acacia pulchella var. *goadbyi*
Acacia pulchella var. *pulchella*
Acacia pulchella var. *reflexa*
Acacia pyrifolia
Acacia resinimarginea
Acacia restiacea
Acacia retrorsa **P2**
Acacia rostellifera
Acacia rostellifera x *xanthina*
Acacia saligna
Acacia saligna subsp. *lindleyi ms*
Acacia saligna subsp. *osullivaniana ms*
Acacia saligna subsp. *saligna ms*
Acacia scirpifolia
Acacia sessilis
Acacia shuttleworthii
Acacia signata
Acacia sp. Mullewa (B.R. Maslin 4269)
Acacia sp. Tootbardie Road (B.R. Maslin 8204)
Acacia spathulifolia
Acacia sphacelata
Acacia sphacelata subsp. *sphacelata*
Acacia sphacelata subsp*. verticillata*
Acacia splendens **R**
Acacia squamata
Acacia stenoptera
Acacia stenoptera (N.B. Branches muricate)
Acacia stenoptera (Phyllodes scabrid)
Acacia teretifolia
Acacia truncata
Acacia ulicina
Acacia willdenowiana
Acacia wilsonii **R**
Acacia xanthina
Acaena echinata
Acanthocarpus canaliculatus
Acanthocarpus preissii
Acanthocarpus sp. Ajana (C.A. Gardner 8596)
Acanthophora dendroides

Acetabularia calyculus
Acrotriche cordata
Actinobole condensatum
Actinobole uliginosum
Actinostrobus acuminatus
Actinostrobus arenarius
Actinostrobus pyramidalis
Actinotus leucocephalus
Adelophycus corneus
Adenanthos cygnorum
Adenanthos cygnorum subsp. *cygnorum*
Adenanthos drummondii
Adenanthos stictus
Adriana quadripartita
Aecidium sp.
Aira cupaniana
Alexgeorgea nitens
Alexgeorgea subterranea
Allocasuarina campestris
Allocasuarina drummondiana
Allocasuarina grevilleoides **P3**
Allocasuarina huegeliana
Allocasuarina humilis
Allocasuarina lehmanniana
Allocasuarina lehmanniana subsp. *lehmanniana*
Allocasuarina microstachya
Allocasuarina ramosissima **P3**
Allocasuarina sp.
Allocasuarina thuyoides
Alyogyne hakeifolia
Alyogyne huegelii
Alyogyne huegelii var*. huegelii*
Alyogyne huegelii var. *wrayae*
Alyogyne wrayae
Amanita brunneiphylla
Amanita sp*.*
Amanita umbrinella
Amanita xanthocephala
Amansia rhodantha
Amansia serrata
Amaranthus albus
Amphibolis antarctica
Amphiplexia hymenocladioides
Amphiplexia racemosa
Amphipogon caricinus
Amphipogon caricinus var. *caricinus*
Amphipogon debilis
Amphipogon turbinatus
Amphiroa anceps
Amphiroa gracilis
Amyema linophylla subsp. *linophylla*
Amyema miraculosa subsp. *miraculosa*
Amyema preissii
Anadyomene brownii
Anagallis arvensis
Anagallis arvensis var. *arvensis*
Anagallis arvensis var. *caerulea*
Anarthria aff. *polyphylla*
Anarthria gracilis
Anarthria humilis
Anarthria humilis x *gracilis*
Anarthria laevis
Anarthria polyphylla
Andersonia aff. *lehmanniana*
Andersonia gracilis **R**
Andersonia heterophylla
Andersonia involucrata
Andersonia lehmanniana
Andersonia lehmanniana subsp. *lehmanniana*
Andersonia lehmanniana subsp. *pubescens*
Andersonia mysosma
Andersonia opalescens
Andersonia sp.
Aneuria latifolia
Angianthus aff. *milnei*
Angianthus aff. *tomentosus*
Angianthus cunninghamii
Angianthus preissianus
Angianthus sp.
Angianthus tomentosus
Anigozanthos humilis
Anigozanthos humilis subsp. Badgingarra (S.D. Hopper 7114) PN **P2**
Anigozanthos humilis subsp. *chrysanthus / humilis*
Anigozanthos humilis subsp. *chrysanthus* P4
Anigozanthos humilis subsp. *grandis*
Anigozanthos humilis subsp. *grandis* x *humilis*
Anigozanthos humilis subsp. *humilis*
Anigozanthos humilis x *manglesii*
Anigozanthos humilis x *viridis*
Anigozanthos manglesii
Anigozanthos manglesii subsp. *quadrans*
Anigozanthos manglesii var. x *angustifolius*
Anigozanthos pulcherrimus
Anigozanthos sp.
Anigozanthos viridis subsp. Cataby (S.D. Hopper 1786) PN
Anigozanthos viridis subsp. *terraspectans* **R**
Anigozanthos viridis subsp. *viridis*
Anogramma leptophylla
Anthocercis ilicifolia subsp. *ilicifolia*
Anthocercis littorea
Anthoceros laevis
Anthracobia sp.
Aotus gracillima
Aotus procumbens
Aphelia brizula
Aphelia cyperoides
Aphelia nutans
Apium annuum
Apium prostratum var. *prostratum*

Apjohnia sp.
**Arctotheca calendula*
**Arctotis stoechadifolia*
Arcyria denudata
Arcyria minuta
Areschougia ligulata
Aristida sp.
Arnocrinum gracillimum **P2**
Arnocrinum preissii
Arthropodium curvipes
Arthropodium dyeri
Arthropodium sp.
Asparagopsis taxiformis
**Asparagus asparagoides*
Astartea scoparia
Asterella drummondii
Asteridea asteroides
Asteridea athrixioides
Asteridea pulverulenta
Asterolasia drummondii **P4**
Asteromenia sp.
Astroloma aff. *glaucescens*
Astroloma ciliatum
Astroloma glaucescens
Astroloma macrocalyx
Astroloma microcalyx
Astroloma microdonta
Astroloma pallidum
Astroloma pedicellatum
Astroloma serratifolium
Astroloma serratifolium var. *placidum*
Astroloma sp.
Astroloma sp.Cataby (E.A. Griffin 1022) PN **P4**
Astroloma sp.Cataby(A.J.G.Wilson 197)
Astroloma stomarrhena
Astroloma xerophyllum
Atriplex amnicola
Atriplex cinerea
Atriplex codonocarpa
Atriplex isatidea
Auricularia mesenterica
Austrodanthonia acerosa
Austrodanthonia aff. *racemosa*
Austrodanthonia caespitosa
Austrodanthonia occidentalis
Austrodanthonia setacea
Austrodanthonia sp.
Austrostipa compressa
Austrostipa elegantissima
Austrostipa flavescens
Austrostipa hemipogon
Austrostipa macalpinei
Austrostipa mollis
Austrostipa sp. Cairn Hill (M.E. Trudgen 21176) PN
Austrostipa variabilis
**Avellinia michelii*
**Avena abyssinica*
**Avena barbata*
**Avena sativa*
Azolla filiculoides

Baeckea camphorosmae
Baeckea crispiflora
Baeckea crispiflora subsp. Mt Lesueur (E.A. Griffin 2325) PN
Baeckea crispiflora var. *tenuior*
Baeckea grandiflora
Baeckea grandis
Baeckea preissiana
Baeckea robusta
Baeckea sp.
Baeckea sp. Bunney Road (S. Patrick 4059) PN **P2**
Baeckea sp. Darling Range (R.J. Cranfield 1673) PN
Baeckea sp. Mingenew (M.E. Trudgen 12029) PN
Baeckea sp. Moora (R. Bone 1993/1) PN **P3**
Baeckea sp. Perth Region (R.J. Cranfield 444) PN **P3**
Baeckea tenuifolia
Banksia armata
Banksia armata var. armata
Banksia attenuata
Banksia bipinnatifida subsp. multifida
Banksia burdettii
Banksia candolleana
Banksia carlinoides
Banksia catoglypta ***P2***
Banksia chamaephyton ***P4***
Banksia cypholoba ***P3***
Banksia dallanneyi
Banksia dallanneyi subsp. *media*
Banksia dallanneyi subsp. *pollosta* **P3**
Banksia dallanneyi var. *dallanneyi*
Banksia echinata
Banksia elegans **P4**
Banksia fraseri
Banksia fraseri var. *crebra* **P3**
Banksia fraseri var. *effusa* **P2**
Banksia fraseri var. *fraseri*
Banksia fuscobractea
Banksia fuscobractea **R**
Banksia glaucifolia
Banksia grandis
Banksia grossa
Banksia hewardiana
Banksia ilicifolia
Banksia incana
Banksia incana var. *brachyphylla*

Banksia incana var. *incana*
Banksia kippistiana var. *kippistiana*
Banksia kippistiana var. *kippistiana*
Banksia kippistiana var. *paenepeccata* **P3**
Banksia lanata
Banksia laricina
Banksia leptophylla
Banksia leptophylla var. *leptophylla*
Banksia leptophylla var. *melletica*
Banksia littoralis
Banksia menziesii
Banksia micrantha
Banksia nana
Banksia nivea
Banksia nivea subsp. *nivea*
Banksia nobilis subsp. *fragrans* **P3**
Banksia nobilis subsp. *nobilis*
Banksia platycarpa **P4**
Banksia polycephala
Banksia prionophylla **P1**
Banksia prionotes
Banksia pteridifolia subsp. *vernalis* **P3**
Banksia sclerophylla **P4**
Banksia serratuloides subsp. *perissa* **R**
Banksia sessilis
Banksia sessilis var. *cygnorum*
Banksia sessilis var. *flabellifolia*
Banksia sessilis var. *sessilis*
Banksia shuttleworthiana
Banksia sp.
Banksia sphaerocarpa var. *pumilio*
Banksia sphaerocarpa var. *sphaerocarpa*
Banksia splendida subsp. *macrocarpa* **P3**
Banksia stenoprion
Banksia strictifolia
Banksia subulata **P3**
Banksia telmatiaea
Banksia tortifolia
Banksia tricuspis **P4**
Banksia tridentata
Banksia vestita
Banksiamyces sp.
Barbula calycina
**Bartsia trixago*
Baumea articulata
Baumea juncea
Beaufortia aestiva
Beaufortia aff. *bracteosa*
Beaufortia bicolor **P3**
Beaufortia bracteosa
Beaufortia elegans
Beaufortia eriocephala **P3**
Beaufortia sp.
Beaufortia squarrosa
Beyeria cinerea
Beyeria cinerea subsp. *cinerea* **P3**
Beyeria gardneri **P3**
Beyeria similis **P2**
Beyeria sulcata var. *gracilis*
Billardiera fraseri
Billardiera venusta
Blancoa canescens
Blennospora drummondii
Bolboschoenus caldwellii
Boletus sp.
Bornetia binderiana
Boronia aff. *penicillata*
Boronia aff. *ramosa*
Boronia busselliana
Boronia coerulescens
Boronia coerulescens subsp. *spicata*
Boronia coerulescens subsp. *spinescens*
Boronia crassifolia
Boronia cymosa
Boronia ericifolia **P2**
Boronia purdieana subsp. *purdieana*
Boronia ramosa
Boronia ramosa subsp. *anethifolia*
Boronia ramosa subsp. *lesueurana* **P2**
Boronia ramosa subsp. *ramosa*
Boronia scabra
Boronia scabra subsp. *condensata* **P2**
Boronia scabra subsp. *scabra*
Boronia subsessilis
Borya laciniata
Borya sp.
Borya sphaerocephala
Bossiaea eriocarpa
Bossiaea spinescens
Botryocladia sonderi
Bovista pulyuggeodes
Brachyloma jillup
Brachyloma preissii subsp. *preissii*
**Brachypodium distachyon*
Brachyscome bellidioides
Brachyscome ciliaris
Brachyscome exilis
Brachyscome glandulosa
Brachyscome iberidifolia
Brachyscome perpusilla
Brachyscome pusilla
Brachyscome sp.
**Brassica barrelieri* subsp. *oxyrrhina*
**Brassica napus*
**Brassica rapa*
Brassica sp.
**Brassica tournefortii*
Breutelia affinis
**Briza maxima*
**Briza minor*
Bromus arenarius
**Bromus diandrus*

**Bromus hordeaceus*
**Bromus madritensis*
**Bromus rubens*
Bromus sp.
Brongniartella australis
Bruchia brevipes
Bryopsis foliosa
Buellia pruinosa
Buellia sp.
Buellia substellulans
Bulbine semibarbata
Burchardia bairdiae
Burchardia congesta
Burchardia multiflora
Byblis gigantea **P2**
Byblis lamellata

Caesia micrantha
Caesia sp. Wongan (K.F. Kenneally 8820) PN
**Cakile maritima*
Caladenia arenicola
Caladenia arenicola x *longicauda* subsp. *borealis*
Caladenia crebra
Caladenia cristata **P4**
Caladenia denticulata
Caladenia discoidea
Caladenia flava subsp. *flava*
Caladenia footeana
Caladenia hirta subsp. *hirta*
Caladenia hirta subsp. *hirta* x *rosea*
Caladenia hirta subsp. *rosea*
Caladenia latifolia
Caladenia longicauda
Caladenia longicauda subsp. *albella*
Caladenia longicauda subsp. *borealis*
Caladenia longicauda subsp. *borealis x lorea*
Caladenia longicauda subsp. *calcigena*
Caladenia longicauda subsp. *eminens*
Caladenia longicauda x *lorea*
Caladenia lorea
Caladenia occidentalis
Caladenia pectinata
Caladenia radialis
Caladenia roei
Caladenia vulgata
Calandrinia aff. sp. Blackberry (D.M. Porter 171)
Calandrinia calyptrata
Calandrinia corrigioloides
Calandrinia eremaea
Calandrinia liniflora
Calandrinia polypetala
Calandrinia sp.
Calandrinia sp. Blackberry (D.M. Porter 171) PN
Calandrinia sp. Kenwick (G.J. Keighery 10905) PN
Calandrinia sp. SW coastal (J. Dodd 753) PN
Calectasia aff. *narragara*
Calectasia browneana **P2**
Calectasia cyanea **R**
Calectasia grandiflora subsp. Wheatbelt (A.M. Coates 4315) PN
Calectasia hispida
Calectasia narragara
Calectasia palustris **P1**
Callistemon phoeniceus
Callitris canescens
Callitris preissii
Callophycus costatus
Callophycus dorsifer
Callophycus dorsiferus
Callophycus harveyanus
Callophycus oppositifolius
Caloplaca cinnabarina
Calothamnus blepharospermus
Calothamnus glaber ms
Calothamnus hirsutus
Calothamnus longissimus
Calothamnus quadrifidus
Calothamnus quadrifidus var. (H. Demarz 989)
Calothamnus sanguineus
Calothamnus sp.
Calothamnus torulosus
Calotis erinacea
Calvatia candida
Calvatia sp.
Calytrix angulata
Calytrix aurea
Calytrix chrysantha **P4**
Calytrix depressa
Calytrix drummondii
Calytrix ecalycata subsp. *brevis* **P3**
Calytrix ecalycata subsp. *ecalycata* **P3**
Calytrix flavescens
Calytrix fraseri
Calytrix glutinosa
Calytrix leschenaultii
Calytrix platycheiridia **P2**
Calytrix sapphirina
Calytrix sp. Eneabba (B.J. Lepschi & T.R. Lally BJL3617) PN
Calytrix strigosa
Calytrix variabilis
Campylopus australis
**Campylopus introflexus*
Canoparmelia norsticticata
Canoparmelia pruinata
Carex preissii
Carpobrotus virescens
Carpopeltis phyllophora
Carpopeltis spongiaplexus
Carpothamnion gunnianum
Cassytha aurea

Cassytha aurea var. *aurea*
Cassytha aurea var. *hirta*
Cassytha flava
Cassytha glabella
Cassytha glabella forma bicallosa
Cassytha pomiformis
Cassytha racemosa
Cassytha racemosa forma pilosa
Cassytha racemosa forma racemosa
Casuarina obesa
Catacolea enodis **P2**
Caulerpa cactoides
Caulerpa distichophylla
Caulerpa flexilis
Caulerpa flexilis var. *muelleri*
Caulerpa lentillifera
Caulerpa obscura
Caulerpa sedoides forma geminata
Caulerpa simpliciuscula
Caulerpa sp.
Caulocystis uvifera
Caustis dioica
**Centaurea melitensis*
Centaurium spicatum
**Centaurium tenuiflorum*
Centella asiatica
Centipeda cunninghamii
Centrolepis alepyroides
Centrolepis aristata
Centrolepis cephaloformis subsp. *cephaloformis*
Centrolepis drummondiana
Centrolepis glabra
Centrolepis inconspicua
Centrolepis mutica
Centrolepis pilosa
Centrolepis polygyna
Cephalosorus carpesioides
Ceramium isogonum
Ceramium puberulum
Ceramium rubrum
**Cerastium pumilum*
Ceratogyne obionoides
Chaetanthus aristatus
**Chamaecytisus palmensis*
Chamaescilla corymbosa
Chamaescilla corymbosa var. *corymbosa*
Chamaescilla gibsonii **P3**
Chamaescilla versicolor
Chamelaucium drummondii
Chamelaucium drummondii subsp. *drummondii*
Chamelaucium drummondii subsp. *hallii*
Chamelaucium griffinii **R**
Chamelaucium hamatum
Chamelaucium uncinatum
Champia zostericola
Chauviniella coriifolia
Cheilanthes austrotenuifolia
Cheilanthes sieberi subsp. *sieberi*
Cheilanthes sp.
**Chenopodium glaucum*
**Chenopodium murale*
Chondria dangeardii
Chondria curdieana
Chondria dangeardii
Chondria sp.
Chondria succulenta
Chondrophycus brandenii
Chordifex chaunocoleus **P4**
Chordifex microcodon
Chordifex reseminans **P1**
Chordifex sinuosus
Chordifex stenandrus
Chorizandra enodis
Chorizema aciculare subsp. *aciculare*
Chorizema aciculare subsp. *laxum*
Chorizema cordatum
Chorizema ilicifolium
Chorizema rhynchotropis
Chroococcus sp.
Chrysocephalum apiculatum
Chrysothrix candelaris
Chthonocephalus pseudevax
Cladonia southlandica
Cladophora valonioides
Cladophoropsis herpestica
Cladurus elatus
Claviclonium ovatum
Clematicissus angustissima
Clematis linearifolia
Cliftonaea pectinata
Codium galeatum
Codium laminarioides
Codium lucasii
Codium mamillosum
Codium spongiosum
Codonocarpus cotinifolius
Coeloclonium sp.
Coeloclonium tasmanicum
Coeloclonium verticillatum
Colpomenia sinuosa
Colus hirudinosus
Comatricha aff. *pulchella* var. *fusca*
Comatricha elegans
Comesperma acerosum
Comesperma calymega
Comesperma ciliatum
Comesperma confertum
Comesperma drummondii
Comesperma flavum
Comesperma integerrimum
Comesperma rhadinocarpum **P2**
Comesperma scoparium

Comesperma volubile
Commersonia pulchella
Conospermum acerosum
Conospermum acerosum subsp. *acerosum*
Conospermum boreale
Conospermum boreale subsp. *ascendens*
Conospermum boreale subsp. *boreale*
Conospermum boreale x *wycherleyi*
Conospermum brachyphyllum
Conospermum canaliculatum
Conospermum canaliculatum subsp. *apiculatum*
Conospermum canaliculatum subsp. *canaliculatum*
Conospermum canaliculatum x *stoechadis*
Conospermum crassinervium
Conospermum densiflorum subsp. *densiflorum*
Conospermum eatoniae **P3**
Conospermum glumaceum
Conospermum incurvum
Conospermum nervosum
Conospermum polycephalum
Conospermum scaposum **P3**
Conospermum sp.
Conospermum stoechadis
Conospermum stoechadis subsp. *sclerophyllum*
Conospermum stoechadis subsp. *stoechadis*
Conospermum triplinervium
Conospermum unilaterale
Conospermum wycherleyi
Conospermum wycherleyi subsp. *glabrum*
Conospermum wycherleyi subsp. *wycherleyi*
Conostephium magnum **P4**
Conostephium minus
Conostephium pendulum
Conostephium preissii
Conostephium sp. Badgingarra (E.A. Griffin 6814) PN
Conostylis aculeata x *festucacea*
Conostylis aculeata
Conostylis aculeata subsp. *aculeata*
Conostylis aculeata subsp. *aculeata* x *breviflora*
Conostylis aculeata subsp. *breviflora*
Conostylis aculeata subsp. *bromelioides*
Conostylis aculeata subsp. *preissii*
Conostylis aculeata subsp. *spinuligera*
Conostylis aculeata x *candicans*
Conostylis androstemma
Conostylis angustifolia
Conostylis aurea
Conostylis candicans
Conostylis candicans subsp. *procumbens*
Conostylis candicans subsp. *calcicola*
Conostylis candicans subsp. *candicans*
Conostylis candicans subsp. *procumbens*
Conostylis candicans x *aculeata* subsp. *breviflora*
Conostylis canteriata
Conostylis crassinervia subsp. *absens*
Conostylis crassinervia subsp. *crassinervia*
Conostylis festucacea subsp. *festucacea*
Conostylis festucacea subsp. *filifolia*
Conostylis hiemalis
Conostylis juncea
Conostylis latens
Conostylis pauciflora subsp. *euryrhipis* **P4**
Conostylis seminuda
Conostylis setigera
Conostylis setigera subsp. *setigera*
Conostylis sp.
Conostylis teretifolia
Conostylis teretifolia subsp. *planescens*
Conostylis teretifolia subsp. *teretifolia*
Conostylis teretiuscula
Conostylis tomentosa
Conothamnus trinervis
Convolvulus remotus
**Conyza bonariensis*
**Conyza sumatrensis*
**Corrigiola litoralis*
Cortinarius sp.
Corymbia haematoxylon
Corymbia calophylla
Corymbia calophylla x *chlorolampra*
Corymbia haematoxylon
Corynanthera flava
Corynotheca micrantha var. *elongata*
Corynotheca micrantha var. *micrantha*
Cotula australis
Cotula bipinnata
**Cotula coronopifolia*
Cotula cotuloides
Craspedia sp.
Craspedocarpus blepharicarpus
Craspedocarpus ramentaceus
Craspedocarpus venosus
**Crassula alata*
Crassula closiana
Crassula colorata
Crassula colorata var. *acuminata*
Crassula colorata var. *colorata*
Crassula decumbens var. *decumbens*
Crassula exserta
**Crassula glomerata*
**Crassula natans* var. *minus*
Crassula pedicellosa
**Crepis foetida* subsp. *foetida*
Cristonia biloba
Croninia kingiana
Cryptandra connata
Cryptandra intermedia
Cryptandra mutila
Cryptandra myriantha
Cryptandra nutans

Cryptandra pungens
Cryptandra scoparia var. *scoparia*
Cryptandra spyridioides
Cryptandra stellulata **P3**
Cryptonemia kallymenioides
Cryptonemia undulata
Curdiea obesa
Cyanicula gemmata
Cyanostegia corifolia
Cyathochaeta avenacea
Cyathochaeta equitans
**Cynodon dactylon*
**Cyperus congestus*
Cyperus gymnocaulos
**Cyperus laevigatus*
Cyperus sp.
**Cyperus tenuiflorus*
Cystophora monilifera
Cystophora sp.
Cystophyllum muricatum
Cystoseira trinodis

Dampiera alata
Dampiera carinata
Dampiera coronata
Dampiera juncea
Dampiera lavandulacea
Dampiera lindleyi
Dampiera linearis
Dampiera oligophylla
Dampiera sp.
Dampiera sp. Jurien (G. Lullfitz s.n. 10/7/1986) PN **P2**
Dampiera spicigera
Dampiera tephrea **P2**
Dampiera teres
Darwinia helichrysoides
Darwinia helichrysoides x *neildiana*
Darwinia helichrysoides x *sanguinea*
Darwinia neildiana
Darwinia neildiana x *helichrysoides*
Darwinia neildiana x *sanguinea*
Darwinia pauciflora
Darwinia pinifolia
Darwinia sanguinea
Darwinia sp.
Darwinia sp. Watheroo (I.R. McGill 20) PN
Darwinia speciosa
Dasya cliftonii
Dasya elongata
Dasya sp.
Dasyclonium incisum
Dasyclonium sp.
Dasyphila preissii
Dasypogon bromeliifolius
Dasypogon obliquifolius
Daucus glochidiatus
Daviesia angulata
Daviesia benthamii subsp. *benthamii*
Daviesia chapmanii
Daviesia daphnoides
Daviesia debilior subsp. *debilior* **P2**
Daviesia decurrens
Daviesia decurrens subsp. *decurrens*
Daviesia decurrens subsp. *hamata*
Daviesia decurrens x *incrassata* subsp. *incrassata*
Daviesia dielsii **R**
Daviesia divaricata
Daviesia divaricata subsp. *divaricata*
Daviesia epiphyllum
Daviesia hakeoides subsp. *hakeoides*
Daviesia hakeoides subsp. *subnuda*
Daviesia incrassata subsp. *incrassata*
Daviesia incrassata subsp. *teres*
Daviesia longifolia
Daviesia nudiflora
Daviesia nudiflora subsp. *hirtella*
Daviesia nudiflora subsp. *nudiflora*
Daviesia oxyclada
Daviesia pedunculata
Daviesia podophylla
Daviesia polyphylla
Daviesia preissii
Daviesia pteroclada **P3**
Daviesia quadrilatera
Daviesia sp.
Daviesia triflora
Daviesia umbonata
Desmocladus asper
Desmocladus biformis **P3**
Desmocladus castaneus
Desmocladus elongatus **P3**
Desmocladus fasciculatus
Desmocladus lateriticus
Desmocladus myriocladus
Desmocladus parthenicus
Desmocladus semiplanus
Desmocladus virgatus
Dianella revoluta
Dianella revoluta var. *divaricata*
Diaporthe woodii
Dichopogon capillipes
Dichopogon preissii
Dichotomaria obtusata
Dicranema revolutum
Dicrastylis velutina **P3**
Dicroglossum crispatulum
Dictymenia sonderi
Dictymenia tridens
Dictyomenia sonderi

Dictyomenia tridens
Dictyopteris australis
Dictyopteris muelleri
Dictyopteris plagiogramma
Dictyopteris secundispiralis
Dictyota fastigiata
Dictyota moniliformis
Dictyota robusta
Dictyota sp.
Didymodon australasiae
Dielsia stenostachya
**Digitaria ciliaris*
Dillwynia sp.
Dillwynia sp. Northern Sandplains (M. Hislop 3278) PN
Dioscorea hastifolia
Diplolaena ferruginea
Diplolaena angustifolia
Diplolaena cinerea
Diplolaena eneabbensis
Diplolaena ferruginea
Diplolaena leemaniana
Diplolaena obovata
Diplolaena velutina
Diplopeltis huegelii
Diplopeltis huegelii subsp. *huegelii*
Diplopeltis huegelii subsp. *lehmanii*
Diplopeltis huegelii subsp. *lehmannii*
Diplopeltis huegelii subsp. subintegra
Diplopeltis huegelii var. *huegelii / subintegra*
**Diplotaxis muralis*
**Dischisma arenarium*
**Dischisma capitatum*
Diuris aff. *brumalis*
Diuris aff. *recurva*
Diuris brumalis
Diuris corymbosa
Diuris laxiflora
Diuris longifolia
Diuris porrifolia
Diuris recurva **P4**
Diuris setacea
Diuris sp.
Diuris sp. Eneabba (A.H. Burbidge 3941) PN
Dodonaea aptera
Dodonaea bursariifolia
Dodonaea divaricata
Dodonaea ericoides
Dodonaea pinifolia
Drakaea elastica **R**
Drakaea glyptodon
Drakaea gracilis
Drakaea livida
Drakonorchis mesocera
Drechslera campanulata
Drechslera sp.
Drewiana nitella
Drosera eneabba
Drosera helodes
Drosera occidentalis
Drosera allantostigma **P1**
Drosera barbigera
Drosera bulbosa subsp. *bulbosa*
Drosera citrina
Drosera echinoblastus
Drosera eneabba
Drosera erythrorhiza
Drosera erythrorhiza subsp. *erythrorhiza*
Drosera erythrorhiza subsp. *magna*
Drosera gigantea
Drosera gigantea subsp. *gigantea*
Drosera glanduligera
Drosera heterophylla
Drosera humilis
Drosera leioblastus
Drosera leucoblasta
Drosera leucostigma
Drosera macrantha
Drosera macrantha subsp. *macrantha*
Drosera marchantii
Drosera marchantii subsp. *marchantii*
Drosera marchantii subsp. *prophylla* **P1**
Drosera menziesii subsp. *menziesii*
Drosera menziesii subsp. *penicillaris*
Drosera menziesii subsp. *thysanosepala*
Drosera microphylla
Drosera miniata
Drosera nitidula x *ericksoniae subsp. allantostigma*
Drosera pallida
Drosera parvula
Drosera porrecta
Drosera ramellosa
Drosera spilos
Drosera subhirtella
Dryandra fuscobractea **R**
Dysphania glomulifera subsp. *glomulifera*

Ecdeiocolea monostachya
**Echinochloa crusgalli*
Echinostelium sp.
Echinothamnion hystrix
Ecklonia radiata
**Ehrharta calycina*
**Ehrharta longiflora*
**Ehrharta villosa*
Elatine gratioloides
Eleocharis acuta
Eleocharis keigheryi **R**
Elythranthera brunonis
Elythranthera emarginata

Emblingia calceoliflora
**Emex australis*
Encyothalia cliftonii
Enerthenema papillatum
Entosthodon apophysatus
Epilobium hirtigerum
**Eragrostis curvula*
Eragrostis dielsii
Eragrostis elongata
Eremaea x *phoenicea*
Eremaea asterocarpa
Eremaea asterocarpa subsp. *asterocarpa*
Eremaea asterocarpa subsp. *histoclada*
Eremaea atala
Eremaea beaufortioides
Eremaea beaufortioides / pauciflora var. *lachnosanthe / lonchophylla*
Eremaea beaufortioides var. *beaufortioides*
Eremaea beaufortioides var. *lachnosanthe*
Eremaea beaufortioides var. *beaufortioides*
Eremaea beaufortioides var. *lachnosanthe*
Eremaea beaufortioides var. *microphylla*
Eremaea brevifolia
Eremaea ectadioclada
Eremaea fimbriata
Eremaea hadra
Eremaea pauciflora
Eremaea pauciflora var. *calyptra*
Eremaea pauciflora var. *lonchophylla*
Eremaea pauciflora var. *pauciflora*
Eremaea sp.
Eremaea violacea
Eremaea violacea subsp. *raphiophylla*
Eremaea violacea var. *violacea*
Eremaea x *codonocarpa*
Eremaea x *phoenicea*
Eremophila glabra subsp. *albicans*
Eremophila glabra subsp. *chlorella* **R**
Eremophila glabra subsp. Pinjarrega (I. Greeve MG 35) PN
Eremophila sp.
Eriochilus helonomos
**Erodium botrys*
**Erodium cicutarium*
Erodium cygnorum
Erymophyllum ramosum
Erymophyllum ramosum subsp. *involucratum*
Erymophyllum tenellum
Eryngium pinnatifidum
Eryngium pinnatifidum subsp. *palustre* **P3**
Eryngium pinnatifidum subsp. *pinnatifidum*
Eryngium sp.
Erythroclonium angustatum
Erythroclonium muelleri
Erythroclonium sp.
Erythrymenia minuta
Eucalyptus accedens
Eucalyptus leprophloia
Eucalyptus pruiniramis
Eucalyptus abdita **P2**
Eucalyptus abdita x *arachnaea* subsp. *arachnaea*
Eucalyptus absita **R**
Eucalyptus absita x *loxophleba* **P1**
Eucalyptus accedens
Eucalyptus accedens x *arachnaea*
Eucalyptus accedens x *loxophleba*
Eucalyptus accedens x *loxophleba* subsp. *loxophleba*
Eucalyptus aff. *abdita*
Eucalyptus aff. *argutifolia*
Eucalyptus aff. *carnabyi*
Eucalyptus aff. *decipiens*
Eucalyptus aff. *leprophloia*
Eucalyptus aff. *obtusiflora*
Eucalyptus albida
Eucalyptus angularis **P2**
Eucalyptus annuliformis **P1**
Eucalyptus arachnaea
Eucalyptus arachnaea subsp. *arachnaea*
Eucalyptus arachnaea subsp. *arachnaea x incrassata*
Eucalyptus balanites **R**
Eucalyptus brachycorys
Eucalyptus camaldulensis / rudis
Eucalyptus camaldulensis / rudis var. *obtusa*
Eucalyptus camaldulensis var. *obtusa*
Eucalyptus camaldulensis x *rudis*
Eucalyptus conveniens
Eucalyptus crispata **R**
Eucalyptus decipiens
Eucalyptus decipiens subsp. *decipiens*
Eucalyptus diminuta
Eucalyptus dolorosa **R**
Eucalyptus drummondii
Eucalyptus erythrocorys
Eucalyptus exilis
Eucalyptus exilis **P4**
Eucalyptus falcata
Eucalyptus foecunda
Eucalyptus gittinsii
Eucalyptus gittinsii subsp. *illucida*
Eucalyptus gomphocephala
Eucalyptus horistes
Eucalyptus impensa **R**
Eucalyptus incrassata
Eucalyptus johnsoniana **R**
Eucalyptus lane-poolei
Eucalyptus lateritica **R**
Eucalyptus leprophloia **R**
Eucalyptus longicornis
Eucalyptus loxophleba
Eucalyptus loxophleba subsp. *loxophleba*

Eucalyptus loxophleba subsp. *supralaevis*
Eucalyptus macrocarpa subsp. *elachantha* **P4**
Eucalyptus macrocarpa subsp. macrocarpa
Eucalyptus macrocarpa x *pyriformis* **P3**
Eucalyptus marginata subsp. *marginata*
Eucalyptus myriadena
Eucalyptus obtusiflora
Eucalyptus obtusiflora subsp. *dongarraensis*
Eucalyptus pendens **P4**
Eucalyptus pendens x *exilis*
Eucalyptus petrensis
Eucalyptus pleurocarpa
Eucalyptus pluricaulis
Eucalyptus pluricaulis subsp. *pluricaulis*
Eucalyptus pyriformis
Eucalyptus rudis
Eucalyptus rudis subsp. *rudis*
Eucalyptus sp. Badgingarra (D. Nicolle & M. French DN 3515) PN
Eucalyptus suberea **R**
Eucalyptus todtiana
Eucalyptus wandoo subsp. *pulverea*
Eucalyptus wandoo subsp. *wandoo*
Eucalyptus x carnabyi **P4**
Eucalyptus zopherophloia **P4**
Euchilopsis linearis
Euchiton sphaericus
Euptilocladia spongiosa
Euptilota articulata
Exocarpos aphyllus
Exocarpos sparteus

**Festulolium loliaceum*
Ficinia nodosa
Fissidens curvatus var. *curvatus*
Fissidens megalotis
Fissidens taylorii var. *taylorii*
Flavoparmelia sp.
Fossombronia pusilla
Fossombronia sp.
Frankenia densa
Fuligo candida
**Fumaria capreolata*
Funaria microstoma

Gahnia australis
Gahnia trifida
Galaxaura obtusata
**Galium murale*
Gastrolobium axillare
Gastrolobium callistachys **P4**
Gastrolobium capitatum
Gastrolobium celsianum
Gastrolobium dilatatum
Gastrolobium ebracteolatum
Gastrolobium hamulosum **R**
Gastrolobium ilicifolium
Gastrolobium laytonii
Gastrolobium linearifolium
Gastrolobium nervosum
Gastrolobium nudum **P2**
Gastrolobium obovatum
Gastrolobium oxylobioides
Gastrolobium parviflorum
Gastrolobium plicatum
Gastrolobium polystachyum
Gastrolobium polystachyum var. *bidens*
Gastrolobium polystachyum var. *revolutum*
Gastrolobium sp.
Gastrolobium spinosum
Gastrolobium stowardii
Gastrolobium villosum
**Gazania linearis*
Geleznowia verrucosa
Geleznowia verrucosa subsp. Kalbarri (L.M. Broadhurst 123) PN **P3**
Geleznowia verrucosa subsp. *verrucosa*
Gelinaria ulvoidea
Genus sp.
Georgeantha hexandra **P4**
Geranium solanderi
Gigartina disticha
Gilberta tenuifolia
**Gladiolus caryophyllaceus*
Glischrocaryon angustifolium
Glischrocaryon aureum
Gloiocladia australe
Gloiocladia halymenioides
Gloiosaccion brownii
Glossophora nigricans
Gnaphalium indutum
Gnephosis drummondii
Gnephosis sp.
Gnephosis tenuissima
Gompholobium aff. *knightianum*
Gompholobium aristatum
Gompholobium confertum
Gompholobium gairdnerianum **P3**
Gompholobium glutinosum
Gompholobium knightianum
Gompholobium marginatum
Gompholobium muticum
Gompholobium preissii
Gompholobium pungens
Gompholobium roseum **P2**
Gompholobium scabrum
Gompholobium shuttleworthii
Gompholobium sp.
Gompholobium tomentosum
Gonocarpus cordiger

Gonocarpus nodulosus
Gonocarpus pithyoides
Gonocarpus sp.
Goodenia aff. *coerulea*
Goodenia aff. *hassallii*
Goodenia berardiana
Goodenia caerulea
Goodenia coerulea
Goodenia convexa
Goodenia fasciculata
Goodenia hassallii
Goodenia micrantha
Goodenia pinnatifida
Goodenia pulchella
Goodenia pulchella subsp. Coastal Plain A (M. Hislop 634) PN
Goodenia pulchella subsp. Coastal Plain B (L.W. Sage 2336) PN
Goodenia sp.
Goodenia xanthotricha **P2**
Gracilaria flagelliformis
Gracilaria preissiana
Gracilaria ramulosa
Gracilaria sp.
Grateloupia luxurians
Gratiola pedunculata **P2**
Grevillea uniformis
Grevillea acrobotrya
Grevillea aff. *vestita*
Grevillea amplexans subsp. *semivestita*
Grevillea argyrophylla
Grevillea batrachioides **R**
Grevillea biformis subsp. *biformis*
Grevillea biternata
Grevillea calliantha **R**
Grevillea christineae **R**
Grevillea crithmifolia
Grevillea delta **P2**
Grevillea didymobotrya subsp. *didymobotrya*
Grevillea drummondii **P4**
Grevillea endlicheriana
Grevillea eriostachya
Grevillea florida **P3**
Grevillea hakeoides subsp. *stenophylla*
Grevillea hookeriana subsp. *hookeriana*
Grevillea humifusa **R**
Grevillea leptopoda **P3**
Grevillea leucopteris
Grevillea levis
Grevillea metamorpha **P1**
Grevillea olivacea **P4**
Grevillea pilulifera
Grevillea pinaster
Grevillea polybotrya
Grevillea preissii subsp. *glabrilimba*
Grevillea preissii subsp. *preissii*
Grevillea rudis **P4**
Grevillea saccata **P4**
Grevillea shuttleworthiana subsp. *canarina*
Grevillea synapheae subsp. A Flora of Australia (S.D. Hopper 633 PN **P1**
Grevillea synapheae subsp. *minyulo* **P1**
Grevillea synapheae subsp. *pachyphylla*
Grevillea synapheae subsp. *synapheae*
Grevillea tenuiloba **P3**
Grevillea thelemanniana subsp. Coojarloo (B.J. Keighery 28 B) PN **P1**
Grevillea thyrsoides subsp. *pustulata* **P3**
Grevillea thyrsoides subsp. *thyrsoides* **P3**
Grevillea umbellulata
Grevillea uncinulata
Grevillea uncinulata subsp. Coomallo (S.J. Patrick 719) PN
Grevillea uniformis **P3**
Grevillea vestita subsp. *vestita*
Grimmia laevigata
Grimmia pulvinata var. *africana*
Guichenotia alba **P3**
Guichenotia ledifolia
Guichenotia macrantha
Guichenotia micrantha
Guichenotia sarotes
Gyroporus cyanescens
Gyrostemon racemiger
Gyrostemon ramulosus
Gyrostemon subnudus

Haemodorum brevisepalum
Haemodorum discolor
Haemodorum laxum
Haemodorum loratum **P3**
Haemodorum paniculatum
Haemodorum simplex
Haemodorum simulans
Haemodorum spicatum
Haemodorum venosum
Hafellia dissa
Hafellia sp.
Hakea myrtoides
Hakea anadenia
Hakea auriculata
Hakea brownii
Hakea candolleana
Hakea circumalata
Hakea conchifolia
Hakea costata
Hakea cygna subsp. *cygna*
Hakea eneabba
Hakea erinacea
Hakea flabellifolia
Hakea gilbertii

Hakea incrassata
Hakea lissocarpha
Hakea longiflora **P3**
Hakea marginata
Hakea megalosperma **R**
Hakea myrtoides
Hakea neurophylla **P4**
Hakea obliqua subsp. *parviflora*
Hakea platysperma
Hakea polyanthema
Hakea preissii
Hakea prostrata
Hakea psilorrhyncha
Hakea ruscifolia
Hakea scoparia subsp. *scoparia*
Hakea smilacifolia
Hakea spathulata
Hakea stenocarpa
Hakea trifurcata
Hakea undulata
Hakea varia
Halgania sp. Wongan Hills (K.F. Kenneally 2393) PN
Halimeda cuneata
Halimeda sp.
Haliptilon roseum
Haloplegma preissii
Haloragis brownii
Haloragis foliosa **P3**
Haraldiophyllum erosum
Hardenbergia comptoniana
Harperia lateriflora
Hebeloma westraliense
**Helianthus annuus*
Helichrysum luteoalbum
Helichrysum macranthum
**Heliophila pusilla*
Heliotropium curassavicum
Hemiandra gardneri **R**
Hemiandra glabra
Hemiandra glabra subsp. *chimaera*
Hemiandra glabra subsp. *glabra*
Hemiandra hancocksiana **P4**
Hemiandra incana
Hemiandra leiantha
Hemiandra linearis
Hemiandra pungens
Hemiandra rubriflora
Hemiandra rutilans **R**
Hemiandra sp.
Hemigenia appressa
Hemigenia barbata
Hemigenia curvifolia **P2**
Hemigenia diplanthera
Hemigenia incana
Hemigenia sericea
Hemigenia wandooana
Hennedya crispa
Hensmania stoniella **P3**
Hensmania turbinata
Herposiphonia rostrata
Herposiphonia versicolor
Heterocladia australis
Heterocladia caudata
Heterodea muelleri
Heterodoxia denticulata
Heterosiphonia callithamnium
Heterosiphonia crassipes
Heterosiphonia muelleri
Heterostroma nereidiis
Hexagonia apiaria
Hibbertia desmophylla
Hibbertia acerosa
Hibbertia aff. *aurea*
Hibbertia aff. *desmophylla*
Hibbertia aff. *helianthemoides*
Hibbertia aff. *helianthemoides (Northern)*
Hibbertia aff. *huegelii*
Hibbertia aff. *hypericoides*
Hibbertia aff. *pachyrrhiza*
Hibbertia aurea
Hibbertia crassifolia
Hibbertia crassifolia
Hibbertia desmophylla
Hibbertia helianthemoides **P3**
Hibbertia hemignosta
Hibbertia hibbertioides var. *hibbertioides*
Hibbertia huegelii
Hibbertia hypericoides
Hibbertia mylnei
Hibbertia ovata / montana
Hibbertia pachyrrhiza
Hibbertia polystachya
Hibbertia racemosa
Hibbertia sp.
Hibbertia sp. Gnangara (J.R. Wheeler 2329) PN
Hibbertia sp. Mt Lesueur (M. Hislop 174) PN
Hibbertia sp. Tathra (M.A. Langley & J.M. Harvey 1873) PN
Hibbertia sp. Warradarge (M. Hislop 1933) PN
Hibbertia spicata
Hibbertia spicata subsp. *leptotheca* **P3**
Hibbertia spicata subsp. *spicata*
Hibbertia stellaris
Hibbertia stenophylla
Hibbertia subvaginata
Hibiscus drummondii
Hibiscus sp.
Homalocalyx echinulatus **P3**
Homalosciadium homalocarpum
**Hordeum leporinum*
Hordeum sp.

Hormophysa cuneiformis
**Hornungia procumbens*
Hovea pungens
Hovea sp.
Hovea stricta
Hovea trisperma
Hyalosperma cotula
Hyalosperma demissum
Hyalosperma glutinosum subsp. *glutinosum*
Hybanthus aff. *floribundus*
Hybanthus calycinus
Hybanthus floribundus
Hybanthus floribundus subsp. *floribundus*
Hybanthus floribundus subsp. Hill River (E.M. Bennett 2252) PN
Hybanthus sp.
Hydroclathrus clathratus
Hydrocotyle alata
Hydrocotyle callicarpa
Hydrocotyle coorowensis **P2**
Hydrocotyle diantha
Hydrocotyle pilifera var. *glabrata*
Hydrocotyle tetragonocarpa
Hymenocladia conspersa
Hymenocladia dactyloides
Hypericum gramineum
Hypnea charoides
Hypnea musciformis
Hypnea sp.
Hypnea valentiae
Hypocalymma angustifolium
Hypocalymma gardneri **P3**
Hypocalymma hirsutum
Hypocalymma linifolium **P1**
Hypocalymma puniceum
Hypocalymma serrulatum **P3**
Hypocalymma sp. Cataby (G.J. Keighery 5151) PN P1
Hypocalymma sp. Dandaragan (C.A. Gardner 9014) PN P1
Hypocalymma sp. Gairdner Range (C.A. Gardner 9091) PN P2
Hypocalymma sp. Nambung (R. Spjut & R. Smith s.n. 22/09/1992) PN
Hypocalymma tenuatum **P2**
Hypocalymma tetrapterum **P3**
Hypocalymma xanthopetalum
Hypocalymma xanthopetalum var. Dandaragan (C.A. Gardner 9014) PN
Hypocenomyce foveata
**Hypochaeris glabra*
Hypolaena exsulca
Hypolaena pubescens
Hypolaena robusta **P4**
Hypoxis glabella var. *leptantha*
Hypoxis occidentalis
Hypoxis occidentalis var. *occidentalis*

Inocybe fibrillosibrunnea
Inocybe spadicea
**Ipomoea indica*
Isoetes drummondii
Isolepis aff. *cyperoides*
Isolepis cernua var. *setiformis*
Isolepis congrua
Isolepis cyperoides
**Isolepis marginata*
Isolepis oldfieldiana
Isolepis producta
Isolepis stellata
Isopogon axillaris
Isopogon adenanthoides
Isopogon asper
Isopogon divergens
Isopogon drummondii **P3**
Isopogon dubius
Isopogon inconspicuus
Isopogon linearis
Isopogon sp.
Isopogon sp. Badgingarra (A.S. George 14200) PN **P2**
Isopogon sp. Watheroo (D. Foreman 477) PN
Isopogon sp. Watheroo (Foreman 477)
Isopogon sphaerocephalus
Isopogon teretifolius subsp. *teretifolius*
Isopogon tridens
Isotoma hypocrateriformis
Isotoma hypocrateriformis var. *hypocrateriformis*
Isotoma hypocrateriformis var. *trichogramma*
Isotoma scapigera
Isotropis cuneifolia
Isotropis cuneifolia subsp. *cuneifolia*
Isotropis cuneifolia subsp. *glabra* **P2**
Isotropis drummondii
Isotropis sp.
Jacksonia angulata
Jacksonia anthoclada **P3**
Jacksonia calcicola
Jacksonia calcicola
Jacksonia carduacea
Jacksonia carduacea **P3**
Jacksonia condensata
Jacksonia eremodendron
Jacksonia fasciculata
Jacksonia floribunda
Jacksonia foliosa
Jacksonia furcellata
Jacksonia hakeoides
Jacksonia lehmannii
Jacksonia macrocalyx
Jacksonia nutans

Jacksonia nutans
Jacksonia ramulosa
Jacksonia restioides
Jacksonia rubra **P2**
Jacksonia sternbergiana
Jania affinis
Jania pulchella
Johnsonia pubescens subsp. *pubescens*
**Juncus acutus* subsp. *acutus*
**Juncus bufonius*
Juncus caespiticius
**Juncus capitatus*
Juncus kraussii subsp. *australiensis*
Juncus pallidus
Juncus pauciflorus
Juncus radula

Kallymenia sp.
Kennedia coccinea
Kennedia prostrata
Keraudrenia hermanniifolia
Keraudrenia integrifolia
Kingia australis
Kuetzingia angusta
Kuetzingia canaliculata
Kuetzingia pectinella
Kunzea glabrescens
Kunzea micrantha
Kunzea micrantha subsp. *petiolata*
Kunzea praestans

Labichea cassioides
Labichea lanceolata
Labichea lanceolata subsp. *lanceolata*
Labichea punctata
Laccaria sp.
Lachnagrostis filiformis
Lachnagrostis preissii
Lachnagrostis sp.
Lachnostachys albicans
Lachnostachys eriobotrya
Lachnostachys ferruginea
Lachnostachys spicata
**Lactuca serriola*
Lagenophora huegelii
**Lamarckia aurea*
Lambertia multiflora
Lambertia multiflora var. *multiflora*
Lasiopetalum drummondii
Lasiopetalum floribundum
Lasiopetalum lineare
Lasiopetalum lineare **P3**
Lasiopetalum miseryense
Lasiopetalum sp.
Lasiopetalum sp. Badgingarra (E.A. Griffin 5278) PN **P2**
Lasiopetalum sp. Coorow (E. Ried 101) PN
Lasiopetalum sp. *Coorow* aff. *oldfieldii*
Lasiopetalum sp. Hill River (T.N. Stoate 5) PN **P1**
Lasiopetalum sp. Watheroo (K. Shepherd & C. Wilkins KS 220) PN
Laurencia brongniartii
Laurencia clavata
Laurencia elata
Laurencia filiformis
Lawrencia spicata
Lawrencia squamata
Laxmannia omnifertilis
Laxmannia ramosa
Laxmannia ramosa subsp. *ramosa*
Laxmannia sessiliflora subsp. *australis*
Laxmannia sessiliflora subsp. *drummondii*
Laxmannia sessiliflora subsp. *sessiliflora*
Laxmannia sp.
Laxmannia squarrosa
Lecanora lividocinerea
Lecanora pseudistera
Lecanora symmicta
Lechenaultia biloba
Lechenaultia floribunda
Lechenaultia formosa subsp. Wheatbelt (R.J. Cranfield 4718) PN
Lechenaultia galactites **P3**
Lechenaultia hirsuta
Lechenaultia juncea **P3**
Lechenaultia linarioides
Lechenaultia sp.
Lechenaultia stenosepala
Lechenaultia tubiflora
Lecidea aff. *ochroleuca*
Lecidea ochroleuca
Lecidea sp.
Lemna sp.
Lenormandia pardalis
Lenormandia spectabilis
Leocarpus fragilis
Lepidium pseudotasmanicum
Lepidium foliosum
Lepidium lyratogynum
Lepidium rotundum
Lepidobolus preissianus
Lepidobolus chaetocephalus
Lepidobolus preissianus
Lepidobolus preissianus subsp. *preissianus*
Lepidobolus preissianus subsp. *volubilis*
Lepidobolus quadratus **P3**
Lepidosperma aff. *leptostachyum*
Lepidosperma carphoides
Lepidosperma costale
Lepidosperma gladiatum

Lepidosperma longitudinale
Lepidosperma pubisquameum
Lepidosperma scabrum
Lepidosperma sp.
Lepidosperma sp. A2 Island Flat (G.J. Keighery 7000) PN
Lepidosperma sp. Gingin (M.A. Langley & P.M. Smith MAL 2193) PN
Lepidosperma sp. P1 small head (M.D. Tindale 166A) PN
Lepidosperma squamatum
Leporella fimbriata
Leptoceras menziesii
Leptomeria empetriformis
Leptomeria pauciflora
Leptomeria preissiana
Leptorhynchos scaber
Leptospermum erubescens
**Leptospermum laevigatum*
Leptospermum oligandrum
Leptospermum spinescens
Lepyrodia curvescens **P2**
Leucopogon aff. *conostephioides*
Leucopogon aff. *oldfieldii*
Leucopogon aff. *oxycedrus*
Leucopogon allittii
Leucopogon capitellatus
Leucopogon cinereus
Leucopogon cochlearifolius
Leucopogon conostephioides
Leucopogon crassiflorus
Leucopogon crassifolius
Leucopogon glaucifolius
Leucopogon gracillimus
Leucopogon hamulosus
Leucopogon insularis
Leucopogon leptanthus
Leucopogon obtectus **R**
Leucopogon obtusatus complex
Leucopogon oldfieldii
Leucopogon oldfieldii complex
Leucopogon oliganthus
Leucopogon oxycedrus
Leucopogon parviflorus
Leucopogon phyllostachys
Leucopogon planifolius
Leucopogon plumuliflorus **P2**
Leucopogon polymorphus
Leucopogon propinquus
Leucopogon pubescens
Leucopogon sp.
Leucopogon sp. Arrowsmith (M. Hislop 2509) PN
Leucopogon sp. Badgingarra (R. Davis 421) PN **P2**
Leucopogon sp. Bifid Eneabba (M. Hislop 1927) PN
Leucopogon sp. Cataby (F. Hort 1638) PN
Leucopogon sp. Cockleshell Gully (J.M. Powell 1749) PN
Leucopogon sp. Coujinup (M.A. Burgman 1085) PN
Leucopogon sp. Lesueur (B. Evans 530) PN
Leucopogon sp. Moore River (M. Hislop 1695) PN
Leucopogon sp. Murdoch (M. Hislop 1037) PN
Leucopogon sp. Newdegate (M. Hislop 3585) PN
Leucopogon sp. Northern ciliate (R. Davis 3393) PN
Leucopogon sp. Northern Scarp (M. Hislop 2233) PN
Leucopogon sp. short style (S. Barrett 1578) PN
Leucopogon sp. South Eneabba (E.A. Griffin 8027) PN
Leucopogon sp. Warradarge (M. Hislop 1908) PN
Leucopogon sprengelioides
Leveillea jungermannioides
Levenhookia dubia
Levenhookia octomaculata
Levenhookia pauciflora
Levenhookia pusilla
Levenhookia stipitata
Limacella pitereka
Linum marginale
Lissanthe powelliae
Lobelia alata
Lobelia anceps
Lobelia cleistogamoides
Lobelia heterophylla
Lobelia rarifolia
Lobelia rhombifolia
Lobelia rhytidosperma
Lobospira bicuspidata
**Lobularia maritima*
Logania campanulata
Logania flaviflora
Logania spermacocea
**Lolium multiflorum*
**Lolium rigidum*
Lomandra caespitosa
Lomandra hastilis
Lomandra hermaphrodita
Lomandra maritima
Lomandra micrantha. micrantha
Lomandra preissii
Lomandra sericea
Lomandra suaveolens
Lomentaria monochlamydea
**Lotus angustissimus*
**Lotus subbiflorus*
Loxocarya fasciculata
Loxocarya gigas **P2**
Loxocarya sp.

**Lupinus cosentinii*
Lycoperdon asperum
**Lycopersicon esculentum*
Lyginia imberbis
Lyginia barbata
Lyginia excelsa **P1**
Lyginia imberbis
Lyginia sp.
Lysinema ciliatum
Lysinema ciliatum forma N of Perth (N. Sammy s.n. 15/8/1985) PN
Lysinema ciliatum forma Perth-Bunbury sands (J.W. Green 351) PN
Lysinema elegans
**Lythrum hyssopifolia*

Macarthuria apetala
Macarthuria australis
Macarthuria keigheryi **R**
Macropidia fuliginosa
Macrozamia fraseri
Maireana marginata
Malleostemon sp. Cooljarloo (B. Backhouse s.n. 16/11/88) PN **P1**
Malleostemon tuberculatus
Malva preissiana
Marianthus bicolor
Marianthus coeruleopunctatus
Marianthus erubescens
Marsilea drummondii
**Matthiola incana*
Medicago italica x *littoralis*
**Medicago polymorpha*
**Medicago truncatula*
Meeboldina cana
Meeboldina coangustata
Meionectes tenuifolia **P3**
Melaleuca leuropoma x *systena*
Melaleuca urceolaris x *zonalis*
Melaleuca aff. *ciliosa*
Melaleuca aff. *concreta*
Melaleuca aff. *megacephala*
Melaleuca aff. *megacephala* x *tricophylla*
Melaleuca aff. *subtrigona*
Melaleuca amydra
Melaleuca beardii
Melaleuca brevifolia
Melaleuca calyptroides
Melaleuca cardiophylla
Melaleuca carrii
Melaleuca cf. *carrii*
Melaleuca cf. *dichroma*
Melaleuca cf. *leiopyxis*
Melaleuca cf. *leuropoma*
Melaleuca cf. *seriata*
Melaleuca cf. *trichophylla*
Melaleuca cf. *zonalis*
Melaleuca ciliosa
Melaleuca clavifolia **P1**
Melaleuca concreta
Melaleuca coronicarpa
Melaleuca delta
Melaleuca depressa
Melaleuca dichroma
Melaleuca huegelii subsp. *huegelii*
Melaleuca incana subsp. *incana*
Melaleuca lanceolata
Melaleuca lateriflora subsp. *acutifolia*
Melaleuca lateriflora subsp. *lateriflora*
Melaleuca lateritia
Melaleuca leuropoma
Melaleuca platycalyx
Melaleuca preissiana
Melaleuca psammophila
Melaleuca pungens
Melaleuca radula
Melaleuca rhaphiophylla
Melaleuca ryeae
Melaleuca seriata
Melaleuca sp.
Melaleuca stereophloia
Melaleuca systena
Melaleuca teretifolia
Melaleuca thyoides
Melaleuca tinkeri
Melaleuca trichophylla
Melaleuca uncinata
Melaleuca urceolaris
Melaleuca viminea
Melaleuca viminea subsp. *viminea*
Melaleuca zonalis
**Melilotus indicus*
Mesomelaena graciliceps
Mesomelaena preissii
Mesomelaena pseudostygia
Mesomelaena tetragona
Mesophellia angustispora
Mesophyllum incisum
Metamastophora flabellata
Microcorys sp. Coomallo (L. Haegi 2677) PN
Microlaena stipoides
Microtis alba
Microtis alboviridis
Microtis media
Microtis media subsp. *densiflora*
Microtis media subsp. *media*
Microtis orbicularis
Millotia myosotidifolia
Millotia tenuifolia var. *tenuifolia*
Mirbelia floribunda
Mirbelia ramulosa

Mirbelia spinosa
Mirbelia trichocalyx
**Monoculus monstrosus*
**Monopsis debilis*
Monotaxis grandiflora
Monotaxis grandiflora var. *grandiflora*
**Moraea flaccida*
Moreava mesomelaenae
Muehlenbeckia adpressa
Muehlenbeckia polybotrya
Mychodea marginifera
Mychodeophyllum papillitectum
Myoporum caprarioides
Myoporum insulare
Myriocephalus appendiculatus
Myriocephalus occidentalis
Myriocephalus rudallii
Myriodesma peronii
Myriodesma quercifolia
Myriodesma quercifolium
Myriodesma tuberosum
Myriophyllum muelleri

Neurachne alopecuroidea
Neurymenia fraxinifolia
Nicotiana occidentalis
Nicotiana occidentalis subsp. *hesperis*
Nicotiana rotundifolia
Nitraria billardierei
Nizymenia conferta
Nizymenia furcata
Notocladonia cochleata
Nuytsia floribunda

**Oenothera drummondii* subsp*. drummondii*
**Oenothera laciniata*
**Oenothera stricta* subsp. *stricta*
Olax aurantia
Olax benthamiana
Olax benthamiana (Northern broad leaved)
Olax benthamiana (typical variant)
Olax scalariformis
Olearia ciliata
Olearia dampieri subsp. *dampieri*
Olearia homolepis
Olearia incondita
Olearia lehmanniana
Olearia paucidentata
Olearia rudis
Omphalina sp*.*
**Oncosiphon piluliferum*
Onychosepalum laxiflorum
Onychosepalum microcarpum **P1**
Onychosepalum nodatum **P3**

Opercularia spermacocea
Opercularia spermacocea (coastal form)
Opercularia vaginata
**Ornithopus compressus*
**Ornithopus sativus*
**Orobanche minor*
Orthrosanthus laxus
Orthrosanthus laxus var. *gramineus*
Orthrosanthus laxus var. *laxus*
Osmundaria prolifera
Ottelia ovalifolia
**Oxalis corniculata*
Oxalis exilis
**Oxalis glabra*
Oxalis perennans
Ozothamnus cordatus

Pachydictyon polycladum
Padina elegans
Padina sanctae-crucis
Padina sp.
Papistylus grandiflorus **P2**
Paracaleana dixonii **R**
Paracaleana nigrita
**Parapholis incurva*
**Parentucellia latifolia*
Parietaria cardiostegia
Parietaria debilis
Parmelia sp.
**Paspalum dilatatum*
Patersonia aff. *juncea*
Patersonia aff. *occidentalis*
Patersonia argyrea **P3**
Patersonia drummondii subsp. *drummondii*
Patersonia graminea
Patersonia juncea
Patersonia occidentalis
Patersonia occidentalis var. *latifolia*
Patersonia occidentalis var. *occidentalis*
Patersonia sp.
Patersonia spirifolia **R**
Pelargonium australe
**Pelargonium capitatum*
Pelargonium littorale
Pelargonium littorale subsp. littorale
**Pelargonium* sp.
Penicillus nodulosus
Peniophora sp.
**Pennisetum clandestinum*
**Pentaschistis airoides* subsp. *airoides*
Pericalymma ellipticum
Pericalymma ellipticum var. *ellipticum*
Pericalymma ellipticum var. *floridum*
Pericalymma spongiocaule
Perichaena corticalis

Persicaria decipiens
Persoonia aff. *trinervis*
Persoonia comata
Persoonia filiformis **P2**
Persoonia pungens **P3**
Persoonia quinquenervis
Persoonia rudis **P3**
Persoonia rufiflora
Persoonia trinervis
Pertusaria gibberosa
Pertusaria sp.
Petrophile aculeata
Petrophile aff. *rigida*
Petrophile axillaris
Petrophile biternata **P3**
Petrophile brevifolia
Petrophile chrysantha
Petrophile chrysantha subsp. Watheroo (K.M. Allan 57) PN
Petrophile clavata **P2**
Petrophile drummondii
Petrophile heterophylla
Petrophile linearis
Petrophile linearis x *brevifolia*
Petrophile macrostachya
Petrophile megalostegia
Petrophile nivea **P1**
Petrophile pilostyla subsp. *austrina*
Petrophile recurva
Petrophile rigida
Petrophile scabriuscula
Petrophile seminuda
Petrophile serruriae
Petrophile shuttleworthiana
Petrophile sp.
Petrophile sp. Pithara (P. Armstrong s.n. PERTH 06592090) PN
Petrophile striata
**Petrorhagia dubia*
Peyssonnelia capensis
Peyssonnelia novae-hollandiae
Phacelocarpus alatus
Phacelocarpus apodus
Phacelocarpus labillardieri
Phebalium tuberculosum
Pheladenia deformis
Philotheca pinoides
Philotheca spicata
Philotheca spicata subsp. Moore River National Park (G. & D. Wo) PN
Philydrella pygmaea
Philydrella pygmaea subsp. *pygmaea*
Phlebocarya ciliata
Phlebocarya filifolia
Phlebocarya pilosissima subsp. *pilosissima* **P3**
Phlebocarya pilosissima subsp. *teretifolia* **P2**
Phomopsis leptostromiformis
Phyllangium divergens
Phyllanthus calycinus
Phylloglossum drummondii
Phylloporus sp.
Phymatocarpus porphyrocephalus
Phymatocarpus sp.
**Physalis pubescens*
Physcia poncinsii
Physopsis spicata
Pileanthus filifolius
Pileanthus peduncularis subsp. *peduncularis*
Pilostyles coccoidea
Pilostyles hamiltonii
Pilostyles sp.
Pimelea angustifolia
Pimelea argentea
Pimelea ferruginea
Pimelea floribunda
Pimelea gilgiana
Pimelea imbricata var. *piligera*
Pimelea leucantha
Pimelea suaveolens subsp. *suaveolens*
Pimelea sulphurea
Pimelea sylvestris
Pimelea villifera
Pithocarpa pulchella
Pithocarpa pulchella var. *pulchella*
Pithocarpa sp.
Pittosporum angustifolium
Pittosporum ligustrifolium
Pityrodia bartlingii
Pityrodia dilatata
Pityrodia loxocarpa
Pityrodia uncinata
Pityrodia verbascina
Plantago debilis
Platoma damaecornis
Platysace juncea
Platysace ramosissima **P3**
Platysace sp.
Platysace sp. Eneabba (R. Hnatiuk 770001) PN
Platysace xerophila
Platysiphonia sp.
Platythalia angustifolia
Platytheca sp.
Pleurotus sp.
Plocamium angustum
Plocamium mertensii
Plocamium preissianum
Plocamium sp.
**Poa annua*
Poa drummondiana
Poa poiformis
Poa porphyroclados
Poa sp.

Podolepis canescens
Podolepis capillaris
Podolepis gracilis
Podolepis lessonii
Podolepis sp.
Podotheca angustifolia
Podotheca chrysantha
Podotheca gnaphalioides
Podotheca pritzelii **P3**
Podotheca sp.
Podotheca uniseta **P3**
Pogonolepis stricta
Polianthion wichurae
Pollexfenia lobata
Pollexfenia pedicellata
**Polycarpon tetraphyllum*
Polycerea zostericola
**Polygonum aviculare*
**Polypogon maritimus*
**Polypogon monspeliensis*
Polypogon tenellus
Polysiphonia forfex
Polysiphonia amphibolis
Polysiphonia decipiens
Polysiphonia forfex
Poranthera drummondii
Poranthera microphylla
Posidonia australis
Prasophyllum cyphochilum
Prasophyllum elatum
Prasophyllum fimbria
Prasophyllum gracile
Prasophyllum macrostachyum
Prasophyllum ovale
Prasophyllum parvifolium
Prasophyllum plumiforme
Prasophyllum sargentii
Prostanthera ferricola **P3**
Protokeutzingia australasica
Protokuetzingia australasica
Psilothallia siliculosa
Psilothallia striata
Psora sp.
Pteridium esculentum
Pterochaeta paniculata
Pterocladia lucida
Pterostylis aff. *sanguinea*
Pterostylis aff. *vittata*
Pterostylis dilatata
Pterostylis pyramidalis
Pterostylis sanguinea
Pterostylis sp. broad petals (S.D. Hopper 4429) PN
Pterostylis sp. Slender Snail Orchid (G.J. Keighery 14516) PN
Pterostylis vittata
Ptilotus manglesii
Ptilotus declinatus
Ptilotus drummondii
Ptilotus drummondii var. *drummondii*
Ptilotus gaudichaudii var. *parviflorus*
Ptilotus humilis
Ptilotus humilis subsp. *humilis*
Ptilotus manglesii
Ptilotus polystachyus
Ptilotus polystachyus var. *polystachyus*
Ptilotus sericostachyus subsp. *sericostachyus*
Ptilotus stirlingii
Ptilotus stirlingii var. *stirlingii*
Ptychosema pusillum **R**
Puccinellia stricta
Pultenaea ericifolia
Pultenaea reticulata
Pultenaea sp.
Pultenaea sp. Mt Lesueur (L.A. Orthia 86) PN
Pultenaea verruculosa
Pycnoporus coccineus
Pyrorchis nigricans

Quinetia urvillei
Quoya verbascina

Racopilum cuspidigerum var. *convolutaceum*
Ramalina inflata subsp. *australis*
Ramboldia stuartii
Ranunculus colonorum
Ranunculus pumilio var. pumilio
Ranunculus sessiliflorus
**Raphanus raphanistrum*
Regelia ciliata
**Reichardia tingitana*
Restio aff. *sphacelatus*
Restiosporium meneyae
Restiosporium restionum
Rhabdonia coccinea
Rhagodia baccata subsp. *baccata*
Rhagodia preissii
Rhagodia preissii subsp. *preissii*
Rhagodia sp. Watheroo (R.J. Cranfield & P.J. Spencer 8183) PN
Rhaphanus rhaphanistrum
Rhetinocarpha suffruticosa **P1**
Rhodanthe chlorocephala subsp. *rosea*
Rhodanthe citrina
Rhodanthe corymbiflora
Rhodanthe manglesii
Rhodanthe oppositifolia subsp. *oppositifolia*
Rhodanthe polycephala
Rhodanthe pygmaea
Rhodanthe spicata

Rhodopeltis australis
Rhodopeltis borealis
Rhodophyllis volans
Rhodymenia sonderi
Rhodymenia sp.
Ricinocarpos psilocladus
Ricinocarpos undulatus
**Romulea rosea*
**Romulea rosea* var. *australis*
**Rostraria cristata*
Rosulabryum albolimbatum
Rosulabryum billarderi
Rosulabryum campylothecium
Rosulabryum torquescens
Rulingia borealis
Rulingia densiflora
**Rumex brownii*
**Rumex crispus*
Rumex drummondii **P4**
**Rumex pulcher*
Russula sp.

Salsola tragus
**Salvia verbenaca* Alien Y
Samolus aff. *repens*
Samolus junceus
Samolus repens
Samolus repens var. *paucifolius*
Santalum acuminatum
Sarcocornia blackiana
Sarcocornia quinqueflora
Sarcocornia sp.
Sarconema filiforme
Sargassum lacerifolium
Sargassum distichum
Sargassum fallax
Sargassum peronii
Sargassum podacanthum
Sargassum sp.
Sargassum spinuligerum
Sargassum verruculosum
Scaberia agardhii
Scaevola aff. *phlebopetala*
Scaevola anchusifolia
Scaevola canescens
Scaevola crassifolia
Scaevola glandulifera
Scaevola globulifera
Scaevola humifusa
Scaevola lanceolata
Scaevola nitida
Scaevola phlebopetala
Scaevola pilosa
Scaevola repens
Scaevola repens subsp. Northern Sandplains (R.J. Cranfield & PN
Scaevola repens var. *angustifolia*
Scaevola repens var. *repens*
Scaevola restiacea
Scaevola sericophylla
Scaevola sp.
Scaevola thesioides
Scaevola thesioides subsp. *thesioides*
Scaevola virgata
**Schinus molle* var. *areira*
Schoenus brevisetis
Schoenus aff. *pedicellatus*
Schoenus aff. *pleistemoneus*
Schoenus andrewsii
Schoenus brevisetis
Schoenus brevisetis
Schoenus caespititius
Schoenus clandestinus
Schoenus curvifolius
Schoenus efoliatus
Schoenus grandiflorus
Schoenus griffinianus **P3**
Schoenus hexandrus
Schoenus insolitus
Schoenus lanatus
Schoenus minutulus
Schoenus nanus
Schoenus nitens
Schoenus obtusifolius
Schoenus odontocarpus
Schoenus pedicellatus
Schoenus pennisetis **P1**
Schoenus pleiostemoneus
Schoenus plumosus
Schoenus rigens
Schoenus sculptus
Schoenus sp.
Schoenus sp. A3 Ciliate Sheaths (K.R. Newbey 9402) PN
Schoenus sp. G Broad Sheath (K.L. Wilson 2633) PN
Schoenus sp. smooth culms (K.R. Newbey 7823) PN
Schoenus subfascicularis
Schoenus subflavus
Schoenus subflavus subsp. *subflavus*
Schoenus unispiculatus
Scholtzia sp. Eradu (R.D. Royce 8016)
Scholtzia aff. *involucrata*
Scholtzia aff. *laxifolia*
Scholtzia aff. *oligandra*
Scholtzia aff. *teretifolia*
Scholtzia capitata
Scholtzia cf. *parviflora*
Scholtzia ciliata

Scholtzia involucrata
Scholtzia laxiflora
Scholtzia parviflora
Scholtzia sp.
Scholtzia sp. aff. *laxiflora*
Scholtzia sp. Coomberdale (M.E. & M.E. Trudgen MET 1724) PN
Scholtzia sp. Eneabba (S. Maley 8) PN
Scholtzia sp. Jurien (R. Cranfield & P. Spencer RJC 8443) PN
Scholtzia sp. Wongonderrah (M.E. & M.R. Trudgen MET 12000) PN
Scholtzia teretifolia
Scholtzia umbellifera
Scleroderma verrucosum
Scytothalia dorycarpa
Sebdenia flabellata
Secotium agaricoides
Selaginella gracillima
Sematophyllum homomallum
Semnocarpa minuta
Senecio glossanthus x *pinnatifolius*
Senecio multicaulis subsp. *multicaulis*
Senecio pinnatifolius
Senecio pinnatifolius var. *latilobus*
Senecio sp.
Senna artemisioides
Sida hookeriana
Siloxerus filifolius
Siloxerus humifusus
Siloxerus multiflorus
Siphonocladus tropicus
Siphula sp.
Solanum hoplopetalum
Solanum lasiophyllum
**Solanum nigrum*
Solanum oldfieldii
**Solanum sisymbriifolium*
Solanum sp.
Solanum symonii
Solieria robusta
**Sonchus asper*
Sonchus hydrophilus
**Sonchus oleraceus*
Sowerbaea laxiflora
Spatoglossum macrodontum
**Spergularia diandra*
Sphaerolobium drummondii
Sphaerolobium gracile
Sphaerolobium linophyllum
Sphaerolobium macranthum
Sphaerolobium medium
Sphaerolobium pulchellum
Spinifex longifolius
Spirogardnera rubescens **R**
Spongoclonium conspicuum
Sporobolus virginicus
Sporochnus radiciformis
Spyridia filamentosa
Spyridium globulosum
**Stachys arvensis*
Stachystemon axillaris
Stachystemon brachyphyllus
Stachystemon vermicularis
Stachystemon virgatus
Stackhousia dielsii
Stackhousia monogyna
**Stellaria media*
Stenanthemum humile
Stenanthemum limitatum **P2**
Stenanthemum notiale subsp. *chamelum*
Stenanthemum notiale subsp. *notiale*
Stenanthemum pomaderroides
Stenanthemum reissekii
Stenocladia australis
Stenopetalum filifolium
Stenopetalum gracile
Stictosporum nitophylloides
Stipa flavescens
Stipa macalpinei
Stipa sp.
Stirlingia abrotanoides
Stirlingia latifolia
Stirlingia simplex
Strangea cyanchicarpa
Strangea cynanchicarpa
Stylidium neurophyllum
Stylidium adpressum
Stylidium adpressum var. *patens*
Stylidium aeonioides **P4**
Stylidium aff. *diuroides*
Stylidium albolilacinum
Stylidium androsaceum
Stylidium araeophyllum
Stylidium bicolor
Stylidium burbidgeanum
Stylidium calcaratum
Stylidium carnosum
Stylidium cf. *repens*
Stylidium crossocephalum
Stylidium cygnorum
Stylidium diplotrichum **P2**
Stylidium diuroides
Stylidium diuroides subsp. *diuroides*
Stylidium diuroides subsp. *paucifoliatum*
Stylidium divaricatum
Stylidium ecorne
Stylidium elongatum
Stylidium emarginatum
Stylidium eriopodum
Stylidium flagellum
Stylidium hesperium

Stylidium hymenocraspedum **P2**
Stylidium inversiflorum **P4**
Stylidium kalbarriense
Stylidium leptophyllum
Stylidium maitlandianum
Stylidium maritimum **P3**
Stylidium miniatum
Stylidium nonscandens **P3**
Stylidium obtusatum
Stylidium periscelianthum
Stylidium petiolare
Stylidium piliferum
Stylidium purpureum
Stylidium pycnostachyum
Stylidium repens
Stylidium rigidulum
Stylidium roseo-alatum
Stylidium sacculatum **P3**
Stylidium scariosum
Stylidium schoenoides
Stylidium sidjamesii
Stylidium sp.
Stylidium sp. Banovich Road (F. & J. Hort 1884) PN **P1**
Stylidium sp. Bindoon (K.F. Kenneally 11405) PN
Stylidium sp. Kalbarri (A. Carr 145) PN
Stylidium spiciforme
Stylidium stenosepalum
Stylidium torticarpum **P3**
Stylidium udusicola
Stylobasium australe
Stypandra glauca
Suaeda australis
Symphiocladia sp.
Synaphea aephynsa
Synaphea aephynsa / *endothrix*
Synaphea aephynsa / *interioris*
Synaphea aephynsa **P3**
Synaphea aff. *aephynsa*
Synaphea aff. *interioris*
Synaphea aff. *spinulosa*
Synaphea endothrix **P2**
Synaphea lesueurensis **P2**
Synaphea sp.
Synaphea sparsiflora **P2**
Synaphea spinulosa
Synaphea spinulosa subsp. *spinulosa*
Synaphea xela **P2**
Syntrichia antarctica

Tecticornia halocnemoides
Tecticornia indica subsp. *bidens*
Tecticornia lepidosperma
Tecticornia syncarpa
Teloschistes chrysophthalmus
Templetonia aculeata
Templetonia retusa
Templetonia sulcata
Tersonia cyathiflora
**Tetragonia decumbens*
Tetraria capillaris
Tetraria microcarpa
Tetraria octandra
Tetratheca angulata **P3**
Tetratheca confertifolia
Tetratheca paucifolia
Tetratheca remota **P1**
Thamnophyllis lacerata
Thelymitra antennifera
Thelymitra apiculata **P4**
Thelymitra campanulata
Thelymitra flexuosa
Thelymitra maculata
Thelymitra pulcherrima
Thelymitra stellata **R**
Thelymitra variegata
Thelymitra villosa
Thelymitra vulgaris
Themeda triandra
**Thinopyrum distichum*
Thomasia aff. *macrocalyx*
Thomasia cognata
Thomasia foliosa
Thomasia glutinosa var. *latifolia*
Thomasia grandiflora
Thomasia grandiflora var. *angustissima*
Thomasia purpurea
Thomasia purpurea var. *undulata*
Thomasia rulingioides
Thomasia sp.
Thomasia tenuivestita **P3**
Thomasia triphylla
Threlkeldia diffusa
Thryptomene hyporhytis
Thryptomene mucronulata
Thryptomene racemulosa
Thryptomene sp.
Thryptomene sp. Lancelin (M.E. Trudgen 14000) PN P2
Thuretia quercifolia
Thysanothecium hookeri
Thysanothecium scutellatum
Thysanotus anceps **P3**
Thysanotus arbuscula
Thysanotus arenarius
Thysanotus asper
Thysanotus dichotomus
Thysanotus glaucus **P4**
Thysanotus manglesianus
Thysanotus multiflorus
Thysanotus patersonii

Thysanotus rectantherus
Thysanotus sp. Badgingarra (E.A. Griffin 2511) PN **P2**
Thysanotus sparteus
Thysanotus speckii
Thysanotus spiniger
Thysanotus tenellus
Thysanotus teretifolius
Thysanotus thyrsoideus
Thysanotus triandrus
Thysanotus vernalis **P3**
Tolypiocladia glomerulata
Tolyposporium sp.
Tortella flavovirens
Tortula atrovirens
Tortula ruralis
**Trachyandra divaricata*
Trachymene aff. *pilosa*
Trachymene coerulea
Trachymene coerulea subsp. *coerulea*
Trachymene coerulea subsp. *coerulea* / *leucopetala*
Trachymene cyanopetala
Trachymene ornata
Trachymene pilosa
Trametes lilacinogilva
Tremelloscypha australiensis
Tribonanthes australis
Tribonanthes brachypetala
Tribonanthes longipetala
Tribonanthes sp.
Tribonanthes violacea
Trichia decipiens
Trichocline spathulata
Trichostomum eckelianum
Tricoryne elatior
Tricoryne sp.
Tricoryne sp. Eneabba (E.A. Griffin 1200) PN
Tricoryne tenella
Tricostularia neesii var*. neesii*
**Trifolium arvense*
**Trifolium arvense* var. *arvense*
**Trifolium campestre*
**Trifolium campestre* var. *campestre*
**Trifolium dubium*
**Trifolium glomeratum*
**Trifolium hirtum*
**Trifolium lappaceum* var. *lappaceum*
**Trifolium resupinatum* var. *resupinatum*
**Trifolium subterraneum*
Triglochin calcitrapa
Triglochin centrocarpa
Triglochin huegelii
Triglochin linearis
Triglochin minutissima
Triglochin mucronata
Triglochin muelleri
Triglochin nana
Triglochin sp. A Flora of Australia (G.J. Keighery 2477) PN
Triglochin sp. B Flora of Australia (P.G. Wilson 4294) PN
Triglochin striata
Triglochin trichophora
Triodia danthonioides
Triodia scariosa
Triodia sp.
Tripterococcus brunonis
Tripterococcus paniculatus **P1**
Triquetrella papillata
Trithuria australis **P2**
Trymalium angustifolium
Trymalium daphnifolium
Trymalium ledifolium var. *ledifolium*
Trymalium ledifolium var. *rosmarinifolium*
Trymalium odoratissimum subsp. *odoratissimum*
Tulostoma australianum
Turbinaria gracilis
Tylotus obtusatus
Typha domingensis

Urocystis bolivarii
Uromyces trifolii
**Urospermum picroides*
**Ursinia anthemoides*
**Urtica urens*
Usnea dasaea
Usnea aff. *scabrida*
Usnea inermis
Usnea scabrida
Usnea scabrida subsp. *scabrida*
Ustilago nuda
Utricularia menziesii
Utricularia multifida
Utricularia tenella
Utricularia violacea

**Vachellia farnesiana*
Velleia cycnopotamica
Velleia reinwardtii
Velleia trinervis
**Vellereophyton dealbatum*
**Verbesina encelioides*
Verreauxia reinwardtii
Verticordia aff. *blepharophylla*
Verticordia amphigia **P3**
Verticordia aurea **P4**
Verticordia blepharophylla
Verticordia blepharophylla x *lindleyi*
Verticordia brachypoda

Verticordia chrysantha
Verticordia chrysanthella
Verticordia densiflora
Verticordia densiflora var. *cespitosa*
Verticordia densiflora var. *densiflora*
Verticordia densiflora x *eriocephala*
Verticordia drummondii
Verticordia endlicheriana var. *compacta*
Verticordia endlicheriana var. *manicula*
Verticordia eriocephala
Verticordia fragrans **P3**
Verticordia grandis
Verticordia huegelii var. *decumbens*
Verticordia huegelii var. *huegelii*
Verticordia huegelii var. *stylosa*
Verticordia huegelii var. *tridens* **P3**
Verticordia insignis subsp. *comagis*
Verticordia insignis subsp*. eomagis* **P3**
Verticordia insignis subsp. *insignis*
Verticordia laciniata
Verticordia laciniata x *nobilis*
Verticordia lindleyi subsp. *lindleyi* **P4**
Verticordia luteola var. *rosea* **P1**
Verticordia muelleriana subsp*. muelleriana* **P3**
Verticordia nitens
Verticordia nobilis
Verticordia nobilis x *laciniata*
Verticordia ovalifolia
Verticordia patens
Verticordia pennigera
Verticordia picta
Verticordia plumosa var. *brachyphylla*
Verticordia pritzelii
Verticordia rutilastra **P3**
Verticordia serrata var. *ciliata*
Verticordia venusta **P3**
Vidalia spiralis
Villarsia capitata
Viminaria juncea
**Vulpia bromoides*
**Vulpia fasciculata*
**Vulpia muralis*
**Vulpia myuros forma myuros*

**Wahlenbergia capensis*
Wahlenbergia gracilenta
Wahlenbergia preissii
Wahlenbergia sp.
Waitzia acuminata
Waitzia acuminata var. *albicans*
Waitzia nitida
Waitzia podolepis
Waitzia suaveolens
Waitzia suaveolens var. *suaveolens*
Walteranthus erectus **P2**
Weissia controversa
Westringia dampieri
Wilsonia backhousei
Wilsonia humilis
Wollastoniella myriophylloides
Wurmbea dilatata
Wurmbea dioica subsp. *alba*
Wurmbea monantha
Wurmbea pygmaea

Xanthoparmelia antleriformis
Xanthoparmelia incantata
Xanthoparmelia lineola
Xanthorrhoea acanthostachya
Xanthorrhoea aff. *preissii*
Xanthorrhoea drummondii
Xanthorrhoea preissii
Xanthorrhoea sp.
Xanthorrhoea sp. Lesueur (G.J. Keighery 16404) PN
Xanthosia ciliata
Xanthosia fruticulosa
Xanthosia huegelii
Xanthosia tomentosa **P4**
Xerochrysum bracteatum
Xylomelum angustifolium

**Zaluzianskya divaricata*
**Zantedeschia aethiopica*
Zonaria turneriana
Zygophyllum fruticulosum
Zygophyllum simile

Appendix

5

APPENDIX 5

Fauna species in the Shire of Dandaragan (Source: W.A Museum, 2009)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates: 30.06939, 115.0404 and 31.00108, 115.9327

Note: not a comprehensive list.

BIRD SPECIES	
Acanthizidae	*Acanthiza innata* *Calamanthus campestris* *Gerygone fusca fusca* *Sericnis frontalis maculatus* *Smicrnis brevirostris*
Accipitridae	*Accipiter cirrhocephalus cirrhocephalus* *Accipiter fasciatus fasciatus* *Aquila audax* *Hamirostra isura* *Pandion haliaetus cristatus*
Aegothelidae	*Aegotheles cristatus cristatus*
Artamidae	*Artamus cinereus*
Caprimulgidae	*Eurostopodus argus*
Charadriidae	*Charadrius rubricollis* *Pluvialis squatarola*
Climacteridae	*Climacteris rufa*
Columbidae	*Ocyphaps lophotes* *Phaps elegans*
Cracticidae	*Cracticus tibicen* *Cracticus tibicen dsalis*
Cuculidae	*Cuculus pallidus*
Dicruridae	*Rhipidura fuliginosa preissi* *Rhipidura leucophrys leucophrys* *Rhipidura leucophrys*
Falconidae	*Falco beriga beriga* *Falco cenchroides cenchroides* *Falco peregrinus* *Falco peregrinus macropus*
Halcyonidae	*Dacelo novaeguineae* *Todiramphus pyrrhopygia* *Todiramphus sanctus sanctus*
Hirundinidae	*Hirundo ariel* *Hirundo neoxena*
Hydrobatidae	*Oceanites marinus dulciae* *Pelagodroma marina dulciae*
Laridae	*Larus dominicanus* *Larus novaehollandiae novaehollandiae* *Sterna anaethetus anaethetus*

	Sterna bergii
	Sterna dougallii gracilis
	Sterna fuscata nubilosa
	Sterna nereis nereis
Maluridae	*Malurus lamberti assimilis*
	Malurus pulcherrimus
	Malurus splendens
	Stipiturus malachurus westernensis
Megapodiidae	*Leipoa ocellata*
Meliphagidae	*Acanthhynchus superciliosus*
	Anthochaera lunulata
	Epthianura tricol
	Lichenostomus virescens
	Lichmera indistincta indistincta
	Manina flavigula
	Phylidonyris melanops
Motacillidae	*Anthus australis australis*
Neosittidae	*Daphoenositta chrysoptera pileata*
Pachycephalidae	*Colluricincla harmonica rufiventris*
	Pachycephala pectalis fuliginosa
	Pachycephala rufiventris rufiventris
Pardalotidae	*Pardalotus striatus*
Pelecanidae	*Pelecanus conspicillatus*
Pelecanoididae	*Pelecanoides urinatrix exsul*
Petroicidae	*Eopsaltria gegiana*
	Petroica goodenovii
Podicipedidae	*Poliocephalus poliocephalus*
	Tachybaptus novaehollandiae novaehollandiae
Procellariidae	*Fulmarus glacialoides*
	Macronectes giganteus
	Puffinus assimilis assimilis
	Puffinus pacificus
Psittacidae	*Cacatua pastinat butleri*
	Cacatua roseicapilla assimilis
	Cacatua sanguinea westralensis
	Calypthynchus banksii naso
	Calypthynchus latirostris
	Calypthynchus sp.
	Melopsittacus undulatus
	Neophema elegans
	Neophema petrophila
	Pezopus wallicus flaviventris
	Platycercus icterotis
	Platycercus icterotis icterotis
	Platycercus spurius
	Platycercus zonarius
	Platycercus zonarius semitquatus
	Platycercus zonarius zonarius
	Polytelis anthopeplus anthopeplus

	Trichoglossus haematodus
Rallidae	*Gallirallus philippensis melli* *Pzana fluminea*
Scolopacidae	*Calidris acuminata* *Calidris alba*
Strigidae	*Ninox novaeseelandiae* *Ninox novaeseelandiae boobook*
Sylviidae	*Cinclamphus mathewsi*
Tytonidae	*Tyto alba*
Zosteropidae	*Zosterops lateralis gouldi*

MAMMAL SPECIES	
Balaenopteridae	*Balaenoptera acutostrata*
Burramyidae	*Cercartetus concinnus*
Canidae	*Vulpes vulpes*
Dasyuridae	*Parantechinus apicalis* *Sminthopsis crassicaudata* *Sminthopsis dolichura* *Sminthopsis gilberti* *Sminthopsis granulipes* *Sminthopsis griseoventer boullangerensis* *Sminthopsis griseoventer griseoventer*
Delphinidae	*Stenella attenuata* *Tursiops truncatus*
Felidae	*Felis catus*
Lepidae	*Oryctolagus cuniculus*
Macropodidae	*Macropus fuliginosus* *Macropus irma* *Macropus robustus erubescens*
Megadermatidae	*Macroderma gigas*
Muridae	*Hydromys chrysogaster* *Mus musculus* *Pseudomys albocinereus* *Rattus fuscipes* *Rattus rattus*
Otariidae	*Neophoca cinerea*
Peramelidae	*Isoodon obesulus* *Phocidae* *Hydrurga leptonyx*
Tachyglossidae	*Tachyglossus aculeatus*
Tarsipedidae	*Tarsipes rostratus*

Vespertilionidae	*Chalinolobus gouldii* *Chalinolobus mio* *Nyctophilus geoffroyi* *Vespadelus regulus*

REPTILE SPECIES	
Agamidae	*Ctenophus maculatus* *Ctenophus maculatus griseus* *Ctenophus maculatus maculatus* *Pogona min* *Pogona min min* *Rankinia adelaidensis* *Rankinia adelaidensis adelaidensis*
Boidae	*Antaresia stimsoni stimsoni* *Aspidites ramsayi* *Melia spilota imbricata*
Cheluidae	*Chelodina oblonga*
Dermochelyidae	*Dermochelys ciacea*
Elapidae	*Brachyurophis fasciolata fasciolata* *Brachyurophis semifasciata* *Demansia psammophis reticulata* *Echiopsis curta* *Neelaps bimaculatus* *Neelaps calonotos* *Notechis scutatus* *Parasuta gouldii* *Parasuta nigriceps* *Pseudechis australis* *Pseudonaja affinis affinis* *Pseudonaja nuchalis* *Simoselaps bertholdi* *Simoselaps littalis*
Gekkonidae	*Christinus marmatus* *Crenadactylus ocellatus* *Crenadactylus ocellatus ocellatus* *Diplodactylus alboguttatus* *Diplodactylus granariensis granariensis* *Diplodactylus natus* *Diplodactylus polyophthalmus* *Gehyra variegata* *Strophurus michaelseni* *Strophurus spinigerus* *Strophurus spinigerus spinigerus* *Underwoodisaurus milii*
Pygopodidae	*Aclys concinna concinna* *Aprasia repens* *Delma australis* *Delma fraseri fraseri* *Delma grayii* *Lialis burtonis* *Pletholax gracilis gracilis* *Pygopus lepidopodus*

Scincidae	*Cryptoblepharus plagiocephalus* *Ctenotus australis* *Ctenotus catenifer* *Ctenotus fallens* *Ctenotus gemmula* *Ctenotus impar* *Ctenotus lancelini* *Ctenotus pantherinus pantherinus* *Cyclodomphus celatus* *Egernia kingii* *Egernia multiscutata bos* *Egernia napoleonis* *Egernia pulchra longicauda* *Hemiergis quadrilineata* *Lerista christinae* *Lerista elegans* *Lerista lineopunctulata* *Lerista planiventralis deca* *Lerista praepedita* *Menetia greyii* *Methia lineoocellata* *Methia obscura* *Tiliqua occipitalis* *Tiliqua rugosa rugosa*
Typhlopidae	*Ramphotyphlops australis*
Varanidae	*Varanus gouldii* *Varanus tristis tristis*

FISH SPECIES

Acanthoclinidae	*Beliops xanthokrossos*
Antennariidae	*Allenichthys glauerti* *Histrio histrio*
Aploactinidae	*Aploactisoma milesii*
Apogonidae	*Apogon cookii* *Apogon fuscus* *Apogon victiae*
Arripidae	*Arripis gegiana*
Atherinidae	*Atherinomus endrachtensis* *Atherinomus ogilbyi* *Atherinosoma elongata*
Batrachoididae	*Batrachomoeus rubricephalus*
Blenniidae	*Aspidontus dussumieri* *Cirripectes hutchinsi* *Parablennius postoculomaculatus*
Bythitidae	*Dermatopsis multiradiatus* *Dinematichthys dasyrynchus* *Dipulus caecus*
Carangidae	*Carangoides fulvoguttatus* *Pseudocaranx dentex* *Seriola hippos*

Carcharhinidae	*Carcharhinus brevipinna* *Carcharhinus obscurus* *Negaprion* sp.
Centropomidae	*Psammoperca waigiensis*
Chaetodontidae	*Chaetodon assarius* *Chelmonops curiosus* *Heniochus acuminatus*
Cheilodactylidae	*Cheilodactylus gibbosus*
Chironemidae	*Threpterius maculosus*
Clinidae	*Cristiceps aurantiacus* *Cristiceps australis* *Heteroclinus adelaidae* *Heteroclinus heptaeolus* *Heteroclinus roseus* *Heteroclinus whitleyi*
Clupeidae	*Spratelloides robustus*
Congiopodidae	*Perryena leucometopon*
Congridae	*Conger wilsoni*
Diodontidae	*Diodon nicthemerus*
Enoplosidae	*Enoplosus armatus*
Fistulariidae	*Fistularia petimba*
Galaxiidae	*Galaxias occidentalis*
Glaucosomatidae	*Glaucosoma hebraicum*
Gnathanacanthidae	*Gnathanacanthus goetzeei*
Gobiesocidae	*Alabes brevis* *Alabes elongata* *Alabes occidentalis* *Aspasmogaster occidentalis* *Parvicrepis* sp. *Posidonichthys hutchinsi*
Gobiidae	*Afurcagobius suppositus* *Callogobius* sp.13 *Callogobius* sp.6 *Eviota bimaculata* *Priolepis nuchifasciata* *Pseudogobius olum*
Gonynchidae	*Gonynchus greyi*
Haemulidae	*Plecthinchus flavomaculatus*
Hemigaleidae	*Hemipristis elongata*
Heterodontidae	*Heterodontus ptusjacksoni*
Hypnidae	*Hypnos monopterygium*

Kyphosidae	*Girella zebra* *Kyphosus sydneyanus* *Kyphosus vaigiensis* *Microcanthus strigatus* *Neatypus obliquus*
Labridae	*Anampses caeruleopunctatus* *Austrolabrus maculatus* *Bodianus frenchii* *Choerodon rubescens* *Cis auricularis* *Dotalabrus alleni* *Eupetrichthys angustipes* *Halichoeres brownfieldi* *Notolabrus celidotus* *Notolabrus parilus* *Pictilabrus laticlavius* *Pictilabrus viridis* *Pseudolabrus biserialis* *Thalassoma lunare* *Thalassoma septemfasciata*
Leptoscopidae	*Crapatalus arenarius*
Lethrinidae	*Gymnocranius grandoculis*
Monacanthidae	*Acanthaluteres spilomelanurus* *Meuschenia hippocrepis* *Monacanthus chinensis* *Scobinichthys granulatus*
Monocentrididae	*Cleidopus gliamaris*
Monodactylidae	*Schuettea woodwardi*
Midae	*Lotella rhacinus*
Mugilidae	*Aldrichetta fsteri* *Liza vaigiensis*
Mullidae	*Parupeneus spilurus* *Upeneichthys lineatus*
Muraenidae	*Gymnothax prasinus* *Gymnothax woodwardi*
Nemipteridae	*Scaevius milii*
Odacidae	*Haletta semifasciata* *Odax acroptilus* *Odax cyanomelas* *Siphonognathus radiatus*
Odontaspididae	*Carcharias taurus*
Ophichthidae	*Muraenichthys* sp. *Phyllophichthus macrurus*
Ophiclinidae	*Opiclinus gracilis*
Oplegnathidae	*Oplegnathus woodwardi*

Ectolobidae	*Sutectus tentaculatus*
Ostraciidae	*Anoplocapros lenticularis* *Aracana aurita* *Lactia concatenatus*
Paralichthyidae	*Pseudhombus jenynsii*
Parascyllidae	*Parascyllium variolatum*
Pataecidae	*Neopataecus waterhousii*
Pempheridae	*Pempheris analis* *Pempheris klunzingeri* *Pempheris multiradiata*
Percichthyidae	*Bostockia posa*
Pinguipedidae	*Parapercis haackei* *Parapercis ramsayi*
Platycephalidae	*Platycephalus bassensis* *Platycephalus speculat*
Plesiopidae	*Paraplesiops meleagris* *Paraplesiops sinclairi*
Plotosidae	*Cnidoglanis macrocephalus* *Paraplotosus albilabris* *Tandanus bostocki*
Polynemidae	*Polydactylus plebius*
Pomacentridae	*Parma mccullochi* *Parma microlepis* *Parma occidentalis* *Plectroglyphidodon leucozonus* *Pomacentrus milleri* *Stegastes obreptus*
Pomatomidae	*Pomatomus saltatrix*
Pseudochromidae	*Labracinus lineatus*
Rachycentridae	*Rachycentron canadus*
Scaridae	*Leptoscarus* sp. *Scarid gibbus*
Scombridae	*Thunnus maccoyii*
Scpaenidae	*Neosebastes nigropunctatus* *Neosebastes pandus* *Scpaena* sp. *Scpaenodes steenei*
Scylihinidae	*Aulohalaelurus labiosus*
Serranidae	*Acanthistius serratus* *Epinephelides armatus* *Epinephelus rivulatus* *Epinephelus septemfasciata*

	Hypoplectrodes nigruber *Hypoplectrodes wilsoni* *Othos dentex* *Plectranthias alleni*
Siganidae	*Siganus fuscescens*
Sillaginidae	*Sillago bassensis* *Sillago ingenuua*
Sparidae	*Rhabdosargus sarba*
Sphyraenidae	*Sphyraena obtusata*
Syngnathidae	*Choeroichthys suillus* *Hippocampus tuberculatus* *Nannocampus subosseus* *Stigmatopa argus* *Stigmatopa* sp. *Vanacampus margaritifer*
Synodontidae	*Synodus* sp. *Trachinocephalus myops*
Terapontidae	*Pelsartia humeralis*
Tetraodontidae	*Tquigener pleurogramma*
Trachichthyidae	*Trachichthys australis*
Tripterygiidae	*Helcogramma decurrens* *Nfolkia brachylepis*
Urolophidae	*Trygonoptera ovalis*
AMPHIBIA SPECIES	
Hylidae	*Litia moei*
Myobatrachidae	*Crinia insignifera* *Crinia pseudinsignifera* *Heleiopus albopunctatus* *Heleiopus eyrei* *Heleiopus psammophilus* *Limnodynastes dsalis* *Myobatrachus gouldii* *Neobatrachus pelobatoides* *Pseudophryne guentheri*

Appendix

6

ROADSIDE CONSERVATION COMMITTEE

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

Introduction

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 include material for making didgeridoos, other types of craft wood, and stakes or poles for various purposes.

The implementation of these simple guidelines by road managers for the removal of flora and timber material from the roadsides will ensure that the vegetated roadside reserve is 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 Conservation and Land Management (CALM) and/or the RCC for advice. Licences allowing the taking of roadside flora may be issued by CALM 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 means that a person can 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, such as those approved under the *Environmental Protection (Clearing of Native vegetation) Regulations 2004*. This provision does not extend to other persons who wish to take protected flora from roadsides.

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

Scientific or Other Prescribed Purposes Licences, where the protected flora is being taken for specific non-commercial purposes.

In issuing a licence, CALM is required to be assured that the activity will not compromise the conservation of the flora. In determining this, CALM will seek advice from the road manager 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, potentially providing a significant financial boost to local economies. Wildflower harvesting in many instances detracts from the biodiversity and tourism values of the roadside and should therefore be discouraged.

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. However, 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 and has a smaller impact on biodiversity. 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. Road managers have been discouraged from supporting or allowing such harvesting to occur, but 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 one of few sources of such seed.

Seed production is an important component of remnant vegetation. Some species, called re-seeder species, regrow only from seed 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 continuity 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 managing authority may consider giving permission for collection of seed from roadsides. Such collection must be under the appropriate licence issued by CALM 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 craft wood. Due to the ease of access, timber harvesters may wish to source timber from roadside vegetation for these purposes.

Roadside managers are encouraged to retain timber on roadsides as an important component of the natural habitat, which fulfils ecological, aesthetic and land management functions. Fallen logs and branches within the roadside create 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 recommends 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 CALM, 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 CALM or the RCC.
- 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 CALM.
- 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 CALM.
- No flora of special conservation concern (Declared Rare Flora or Priority Flora) should be removed without special authorisation through CALM.
- No commercial harvesting of any plant product should be allowed for any reason between the markers that delineate a Environmentally Sensitive Areas defined in the *Environmental Protection (Clearing of Native vegetation) Regulations 2004*.
- Flora harvesting should be prohibited from designated Flora Roads.
- Care should be taken that access to Dieback infected areas is limited to the drier months of the year, and vehicular access disallowed.
- Safety should always be of prime concern and every effort should be made to ensure that personal safety is a key consideration in any harvesting operation.
- Flora harvesters should not operate from the roadside in areas where the vegetation is close to the road, where vehicles cannot be safely parked off the road, or where there is poor driver visibility.

Appendix

7

Guidelines for the Nomination and Management of Flora Roads

Introduction

The Flora Roads program began as an initiative of the Roadside Conservation Committee (RCC), as a means of encouraging road managers to protect and conserve roadside vegetation of high conservation value. Flora Roads highlight areas of high conservation flora as a tourist asset to local communities. These 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;
- harbours rare or endangered plants in 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, Local Government Authority, and the road manager (MRWA, Local Government or CALM);
- 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; and
- threats such as weeds, disturbances, etc.

This information is stored in the RCC Flora Roads Register, a database that 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.

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 provides 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; and
- where rehabilitation is contemplated, local native species should always 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. The RCC has established links with the W.A.Tourism Commission for inclusion on wildflower tourist publications.

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 establishes a *Register of Roads Important for Conservation* also. This register should be consulted prior to any works being initiated in the area.