

Roadside Vegetation and Conservation Values in the Shire of Mundaring



Photo by C. Wilson

October 2008

Roadside Conservation Committee



CONTENTS

EXECUTIVE SUMMARY	1
PART A: OVERVIEW OF ROADSIDE CONSERVATION	2
1.0 Why is Roadside Vegetation Important?	3
2.0 What are the Threats?	4
2.1 Lack of Awareness	4
2.2 Roadside Clearing	4
2.3 Fire	5
2.4 Weeds	6
3.0 Legislative Requirements	7
4.0 Environmentally Sensitive Areas	8
5.0 Flora Roads.....	9
PART B: THE NATURAL ENVIRONMENT IN MUNDARING	10
1.0 Flora.....	11
2.0 Declared Rare Flora (DRF).....	12
3.0 Fauna.....	12
4.0 Remnant Vegetation Cover.....	15
PART C: ROADSIDE SURVEYS IN THE SHIRE OF MUNDARING	16
1.0 Introduction	17
1.1 Methods.....	17
1.2 Mapping Roadside Conservation Values.....	18
1.3 Roadside Conservation Value Categories.....	18
2.0 Using the Roadside Conservation Value Map (RCV) Map.....	20
3.0 Results.....	22
PART D: ROADSIDE MANAGEMENT RECOMMENDATIONS	31
1.0 Management Recommendations.....	32
2.0 Minimising Disturbance.....	33
3.0 Planning for Roadsides.....	34
4.0 Setting Objectives.....	34
REFERENCES	35

FIGURES

- Figure 1. Native vegetation on roadsides in the Shire of Mundaring.
- Figure 2. Number of native plant species in roadsides in the Shire of Mundaring.
- Figure 3. Extent of native vegetation in roadsides in the Shire of Mundaring.
- Figure 4. Roadside vegetation value as a biological corridor in the Shire of Mundaring.
- Figure 5. Weed infestation along roadsides in the Shire of Mundaring.
- Figure 6. Predominant adjoining land use in the Shire of Mundaring.
- Figure 7. Kilometers of surveyed roadsides affected by nominated weeds in the Shire of Mundaring.
- Figure 8. Spatial extent of nominated weeds on roadsides in the Shire of Mundaring.
- Figure 9. Conservation value scores of all roadsides surveyed in the Shire of Mundaring.
- Figure 10. Conservation status of roadsides in the Shire of Mundaring.

TABLES

- Table 1. Remnant vegetation remaining in agricultural areas of Mundaring and surrounding Shires.
- Table 2. Summary of results from the roadside survey in the Shire of Mundaring.
- Table 3. Width of road reserves in the Shire of Mundaring.
- Table 4. Width of vegetation on roadsides in the Shire of Mundaring.

APPENDICES

- Appendix 1. Standard survey sheet.
- Appendix 2. Raw data used to calculate conservation values.
- Appendix 3. Road names and lengths: Shire of Mundaring.
- Appendix 4. Flora species in the Shire of Mundaring.
- Appendix 5. Fauna species in the Shire of Mundaring.
- Appendix 6. Guidelines for Managing the Harvesting of Native Flowers, Seed and Timber from Roadsides.
- Appendix 7. Guidelines for the Nomination and Management of Flora Roads.

Executive Summary

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

Aware of the need to conserve roadside remnants, the Shire of Mundaring, local community members and Mundaring Landcare liaised with the Roadside Conservation Committee (RCC) in 2007 to survey roadsides in their Shire. Surveys to assess the conservation values of roadside remnants were conducted between September and November 2007. Of the 645.9km of roadsides within Mundaring, 234.7km of roadsides were assessed by the RCC to determine their conservation status. This represents the majority of non-urban roads. Maps were produced via a Geographic Information System (GIS). Roadside locations of six nominated weeds and Jarrah habitat trees were also recorded and mapped onto separate clear overlays.

The results of the survey indicated that high conservation value roadsides covered 25.6% of the roadsides surveyed in the Shire, and medium-high conservation value roadsides accounting for 30.9%. Medium-low and low conservation value roadsides occupied 14.2% and 29.3%, respectively. A more detailed analysis of results is presented in Part C of this report.

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

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

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

PART A

OVERVIEW OF

ROADSIDE

CONSERVATION

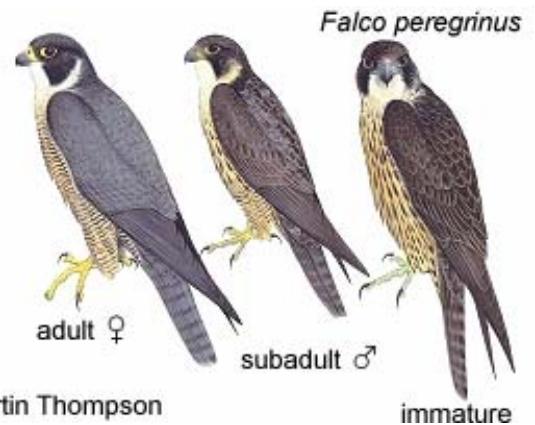
1.0 Why is Roadside Vegetation Important?

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

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

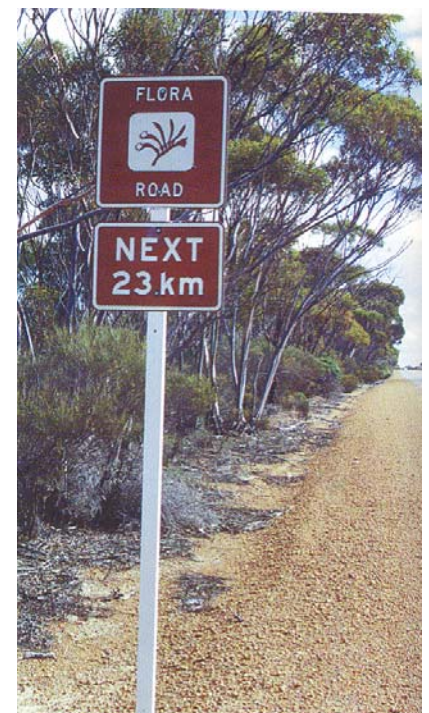
Other important values of transport corridor remnants are that they:

- are often the only remaining example of original vegetation within extensively cleared areas;
- often contain rare and endangered plants and animals. Currently, 53% of Declared Rare Flora (DRF) have at least one population on a roadside and three species are known only to exist in roadside populations;
- provide the basis for our important wildflower tourism industry. The aesthetic appeal of well-maintained roadsides should not be overlooked, and they have the potential to improve local tourism and provide a sense of place;
- often contain sites of Aboriginal/European historic or cultural significance;
- provide windbreaks and stock shelter areas for adjoining farmland by helping to stabilise temperature and reduce evaporation;



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

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



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

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

2.0 What are the Threats?

2.1 Lack of Awareness

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

2.2 Roadside Clearing

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

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

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

2.3 Fire

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

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

The RCC's policy on fire management is:

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

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

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



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

Photo D. Lamont

2.4 Weeds

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

Once weeds become established in an area, they become a long-term management issue, costing considerable resources to control or eradicate. The WA Herbarium records 151 weed species in the Shire of Mundaring (Appendix 4). The roadside survey recorded populations of six significant weeds, and their locations were mapped by the RCC onto clear overlays. The six nominated weeds were:

- African Lovegrass (*Eragrostis curvula*)
- Bridal Creeper (*Asparagus asparagoides*)
- Flaxleaf Bloom (*Genista linifolia*)
- Flinders Range Wattle (*Acacia iteaphylla*)
- Tagasaste (*Chamaecytisus palmensis*)
- Watsonia (*Watsonia* sp.)



Watsonia borbonica

Photos: S.J. Patrick

Watsonia borbonica can be found within the Shire of Mundaring.

Photography by S.J. Patrick. 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 Mundaring Roadside Conservation Value map (2008). The Roadside Conservation Value map and weed overlays will assist the Shire and community in planning, budgeting and coordinating strategic weed control projects. Further information on the presence of these nominated weeds is presented in Part C of this report.



Asparagus asparagoides

Photos: J.P. Pigott & R. Randall

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>)



Eragrostis curvula

Photos: J. Dodd, L. Fontanini & R. Randall

African Lovegrass is a perennial herb with an invasive habit occurring on roadsides in the Shire of Mundaring.
Photography by J.D. Dodd, L. Fontanini & R. Randall. Photo used with the permission of the WA Herbarium, DEC (<http://florabase.calm.wa.gov.au/help/photos#reuse>)

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 land within the road reserve is vested in the managing authority, that is, the local government or Main Roads. The managing authority is responsible for management of the vegetation within that road reserve, be it native or introduced. How that authority chooses to manage that vegetation, however, is governed by a number of Acts and Regulations.

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*.

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 ten clearing principles, which incorporate the:

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

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

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

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*

4.0 Environmentally Sensitive Areas

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

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

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

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

The *Environmentally Sensitive Area Register* should be consulted by the appropriate person prior to work



Survey of Roadside Conservation Values in the Shire of Mundaring

Roadside ESA markers are highly visible.
Photo by K. Jackson

commencing on any particular road. This will ensure that inadvertent damage does not occur.

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

5.0 Flora Roads

A Flora Road is one which has special conservation value because of the vegetation contained within the road reserve. The managing authority may decide to declare a Flora Road based on the results of the survey of roadside conservation value and upon recommendation from the Roadside Conservation Committee (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

Currently Bailup Road is the only Flora Road within the Shire of Mundaring. The roadside survey and the RCV map highlighted a number of roadsides that have the potential to be declared as Flora Roads. These and other roads may be investigated further to see if they warrant a declaration as a Flora Road (see Part C of this report).

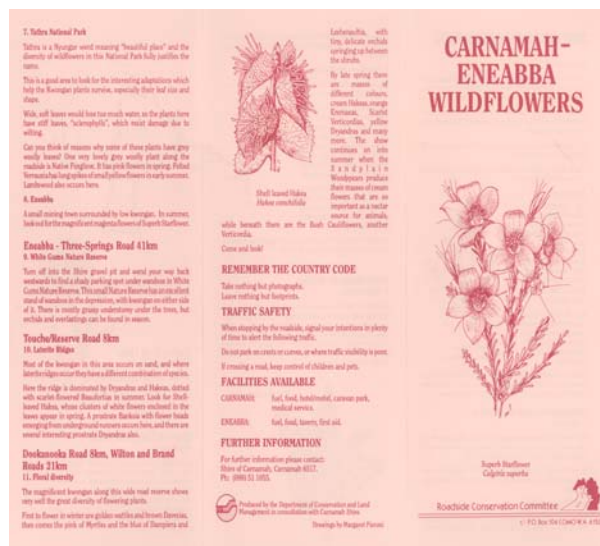
In order to plan roadworks so that important areas of roadside vegetation are not disturbed, road managers should be aware of these areas. To ensure this is not overlooked it is suggested that areas declared as Flora Roads be included in the Shire's *Special Environmental Area Register*.

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

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

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

Survey of Roadside Conservation Values in the Shire of Mundaring



PART B

THE NATURAL ENVIRONMENT IN MUNDARING

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 949 species of native plants from the Shire of Mundaring. The most prolific genera are *Acacia* (37 spp.), *Stylidium* (34 spp.), *Drosera* (20 spp.), and *Hibbertia* (20 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. The RCC suggests using the publication *Guidelines for Managing Special Environmental Areas in Transport Corridors* as a guideline for managing these sites. It is the responsibility of the road manager to ensure these markers are installed, and guides for this are available from the RCC. For information regarding DRF, contact the Department of Environment and Conservation (DEC) Flora Officer for the Perth Hills District. If roadworks are to be carried out near DRF sites, it is advisable to contact DEC at least six weeks in advance.



The Leafless Rock Wattle (*Acacia aphylla*) is a rare native plant which can be found in the Shire of Mundaring.

Photography by S.D Hopper & B.B Maslin. Photo used with the permission of the WA Herbarium, DEC. (<http://florabase.calm.wa.gov.au/help/photos#reuse>)

As of January 2008, there are four locations of declared rare and priority fauna, which are known to occur within roadsides in the Shire of Mundaring. All four of these sites are road verges vested in the Shire. In total, there are two species of Declared Rare and Priority Fauna on roadsides in the Shire, which are:

Declared rare Flora

- *Acacia aphylla*

Priority Flora

- *Tetratheca pilifera*



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

Photo K. Jackson.

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

3.0 Fauna

The Western Australian Museum records approximately 207 species of fauna from the Mundaring 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 Mundaring area, there were 89 bird, 16 amphibia, 33 mammal, 6 fish and 63 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.

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



The Reticulated Velvet Gecko can be found in Mundaring.

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

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

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

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

- **Bilby (*Macrotis lagotis*)**

The Bilby shelters in burrows and occupies a range of habitats from grassland on clayey and stony soils or sandplains to mulga scrub and woodlands on red earths. It has suffered a large decline and contraction in distribution.

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

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

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

This arboreal marsupial seems to prefer dense woodland or tall shrubland with a continuous canopy and is most often associated with dense stands of Rock Sheoak (*Allocasuarina huegeliana*) and Wandoo (*Eucalyptus wandoo*).

- **Brush-tailed Phascogale**

(*Phascogale tapoatafa* sp.)

The Brush-tailed Phascogale is an arboreal marsupial occurring in forest and woodlands where suitable tree hollows are available. Populations fluctuate dramatically in response to invertebrate prey abundance.

- **Forest Red-tailed Black-Cockatoo**

(*Calyptorhynchus banksii naso*)

This subspecies of the Red-tailed Black Cockatoo is restricted to the forests of the south-west. It requires tree hollows to nest and breed and is totally dependent on jarrah-marri forest.

- **Baudin's Black-Cockatoo**

(*Calyptorhynchus baudinii*)

A seasonal visitor to the northern forests and adjacent eastern edge of the coastal plain, Baudin's Black-Cockatoo feeds on the seeds of Eucalypts and various Proteaceous species. It breeds in spring/summer in the southern forests, nesting in tree hollows (primarily in Marri).



© www.lochmantransparencies.com
The Chuditch has been sighted multiple times within the Shire of Mundaring in recent years.

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



© www.lochmantransparencies.com
The Brush-tailed Phascogale has rarely been seen within the Shire.

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

- **Carnaby's Black-Cockatoo**

(*Calyptorhynchus latirostris*)

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



Martin Thompson

Baudin's Black-Cockatoo is rare visitor to the Shire of Mundaring.

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

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

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

4.0 Remnant Vegetation Cover

Only 4.6% of the original native vegetation remains in the Shire of Mundaring (Table 1) and this is located in a variety of tenures from nature reserves to privately owned land. *National Objectives and Targets for Biodiversity Conservation 2001-2005* (Environment Australia, 2001) stated that vegetation types represented by less than 30% are considered ecologically endangered and in need of protection and restoration wherever they are located. Mundaring has less than 4.6% remaining, which is considered very low. The remaining vegetation can easily be further depleted if proactive measures are not taken to manage this priceless resource.

Table 1. Remnant vegetation remaining in the agricultural areas of Mundaring 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)	(%)
Dowerin	188,786	188,786	8,055	4.3
Cunderdin	188,696	188,696	3,312	1.8
Mundaring	185,768	185,768	8,559	4.6
Northam	141,410	141,410	31,229	22.1
Toodyay	173,440	173,440	88,082	50.8
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.



Remnant roadside vegetation connects the landscape.

Photo by Main Roads WA



Tree hollows are of vital importance to breeding birds.

Photo by L. McMahon, Birds Australia

PART C

**ROADSIDE
SURVEYS IN THE
SHIRE OF
MUNDARING**

1.0 Introduction

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

Of the 645.9km of roads in the Shire of Mundaring, 234.7km were surveyed and assessed to determine the conservation status of the road reserves. This represents the majority of non-urban roads found within the shire. The surveys were carried out throughout September 2007. The enthusiastic effort of the roadside surveyors, Environmental Officer Toni Burbidge and the support provided by Mundaring Shire Council ensured that this project was successfully completed. The roadside surveyors were:

- Jemma French
- Meg Wilson
- Una Bell
- Frank Cooper
- Maureen Tie
- Joan Crawford
- Sandy Stone
- Alison Dugand
- Grace Patorniti
- Thomas Hogarth
- Nina Stick

1.1 Methods


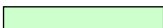

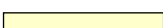
Roadside surveys are undertaken in a vehicle, generally with two people per vehicle. The passenger records the roadside attributes using the RCC's iPAQ hand-held personal computers. At the end of the survey, the iPAQs are returned to the RCC, where the survey information is analysed and mapped.

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

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

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

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

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

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

- width of road reserve;
- width of vegetated roadside;
- presence of utilities/disturbances;
- general comments;
- presence of 6 nominated weeds; and
- presence of Jarrah habitat trees.

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

1.2 Mapping Roadside Conservation Values

The RCC produced a computer-generated map (using a Geographic Information System, or GIS), at a scale of 1:100,000, with townsite enlargements of 1:50,000 for the Shire of Mundaring. 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 Mundaring. The data used to produce both the map and the following figures and tables are presented in Appendix 2. Road names and length information can be found in Appendix 3.

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

1.3 Roadside Conservation Value Categories

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

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



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

Photo K. Jackson.

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

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



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

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

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



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

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

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



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

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

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



Weed control along a roadside.
Photo MRWA



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



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



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

3.0 RESULTS

Using the information collected by the roadside survey, totals of the attributes used to calculate roadside conservation values in the Shire of Mundaring 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 Mundaring					
Length of roadsides surveyed: 469.4km (234.7 km of road)					
<u>Roadside Conservation Status</u>			<u>Roadside Conservation Values</u>		
	Total (km)	(%)	Score	Total (km)	(%)
High (9-12)	120.2	25.6	0	15.5	3.3
Medium-hi	144.9	30.9	1	25.9	5.5
Medium-lo	66.8	14.2	2	39.0	8.3
Low (0-4)	137.6	29.3	3	33.5	7.1
			4	23.7	5.0
Total	469.4	100.0	5	24.3	5.2
			6	42.5	9.1
<u>Native Vegetation in Roadsides</u>					
	Total (km)	(%)	7	62.8	13.4
2-3 vegeta	322.2	68.6	8	82.1	17.5
1 vegetatic	86.1	18.3	9	61.6	13.1
0 vegetatic	61.1	13.0	10	52.9	11.3
			11	4.1	0.9
Total	469.4	100.0	12	1.6	0.3
			Total	469.4	100.0
<u>Number of Native Plant Species</u>			<u>Width of Vegetated Roadside</u>		
	Total (km)	(%)		Total (km)	(%)
Over 20 sp	97.0	20.7	1 to 5 m	373.0	79.5
6 to 19 spe	219.4	46.7	5 to 20 m	27.3	5.8
0 to 5 spec	153.0	32.6	Over 20 m	6.5	1.4
			Unknown	62.6	13.3
Total	469.4	100.0	Total	469.4	100.0
<u>Predominant Adjoining Land Use</u>			<u>Extent of Native Vegetation</u>		
	Total (km)	(%)		Total (km)	(%)
Agricultura	38.5	8.2	Over 80%	80.8	17.2
Agricultura	118.2	25.2	20% to 80%	245.0	52.2
Uncleared	103.0	21.9	Less than 2	143.7	30.6
Drain	2.1	0.4	Total	469.4	100.0
Plantation	2.2	0.5	<u>Value as a Biological Corridor</u>		
Railway	21.9	4.7		Total (km)	(%)
Urban or Ir	175.4	37.4	High	203.4	43.3
Other	8.2	1.8	Medium	157.2	33.5
Total	469.4	100.0	Low	108.8	23.2
			Total	469.4	100.0
<u>Weed Infestation</u>					
	Total (km)	(%)			
Light <20%	224.7	47.9			
Medium 20	142.8	30.4			
Heavy >80	101.9	21.7			
Total	469.4	100.0			

Roadside surveys were carried out in the Shire of Mundaring

Width of Road Reserve

The width of road reserves in the Shire of Mundaring was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 212.9km (90.7%) of roads falling into this category. Of the remaining roads, 13.0km (5.5%) were 40 metres in width and 8.8km (3.8%) of roads had no defined reserve.

Width of Road Reserve – Mundaring		
	Total km	%
0 m	8.8	3.8
20 m	212.9	90.7
40 m	13.0	5.5
Total	234.7	100

Table 3. Width of road reserves in the Shire of Mundaring.

Width of Vegetated Road Reserve

The width of vegetated roadside was recorded by selecting one of four categories; 1-5 metres, 5-20 metres, over 20 metres in width or unknown. The left and right hand sides were recorded independently, and then combined to establish the total figures (Table 5). The majority of roadside vegetation, 373.0km (79.5%), was between 1 to 5 metres in width, followed by 62.6km (13.3%) of roadsides where the width of vegetation was unknown. Roadside vegetation over 20 metres in width spanned 6.5km (1.4%) of the roadsides surveyed, and for 27.3km (5.8%) of the roadsides surveyed the vegetation was between 5 and 20 metres in width.

Width of Vegetated Roadside - Mundaring		
	Total km	%
1-5 m	373.0	79.5
5-20 m	27.3	5.8
Over 20 m	6.5	1.4
Unknown	62.6	13.3
Total	469.4	100

Table 4. Width of vegetation on roadsides in the Shire of Mundaring.

Native Vegetation on Roadsides

Native vegetation in the Mundaring area is most intact and therefore has higher conservation value when there are multiple layers present, i.e. tree, shrub and/or ground layers. Sections with two to three layers of native vegetation covered 68.6% of roadsides (322.2km), 18.3% (86.1km) of roadsides had only one layer and 13.0% (61.1km) had no layers of native vegetation (Table 2 and Figure 1).

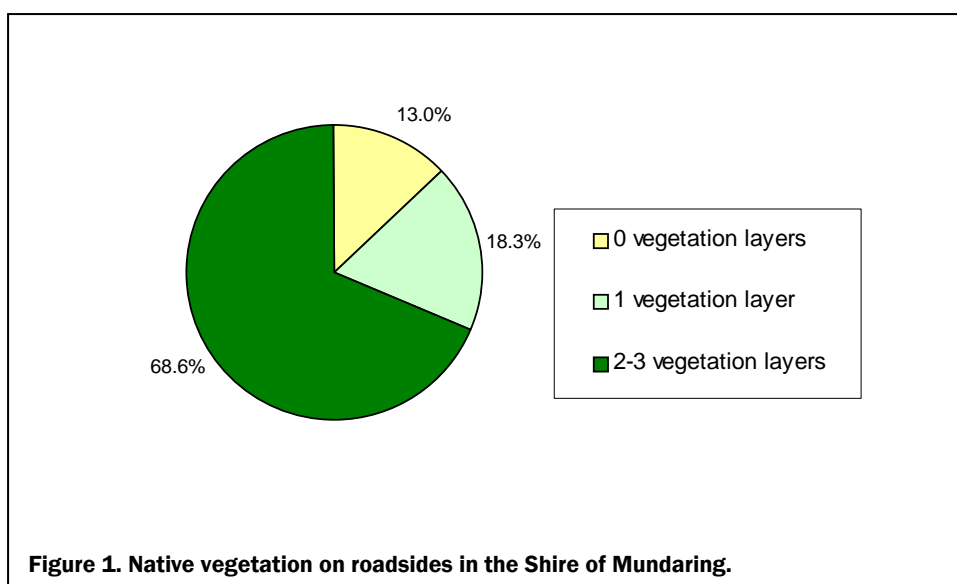
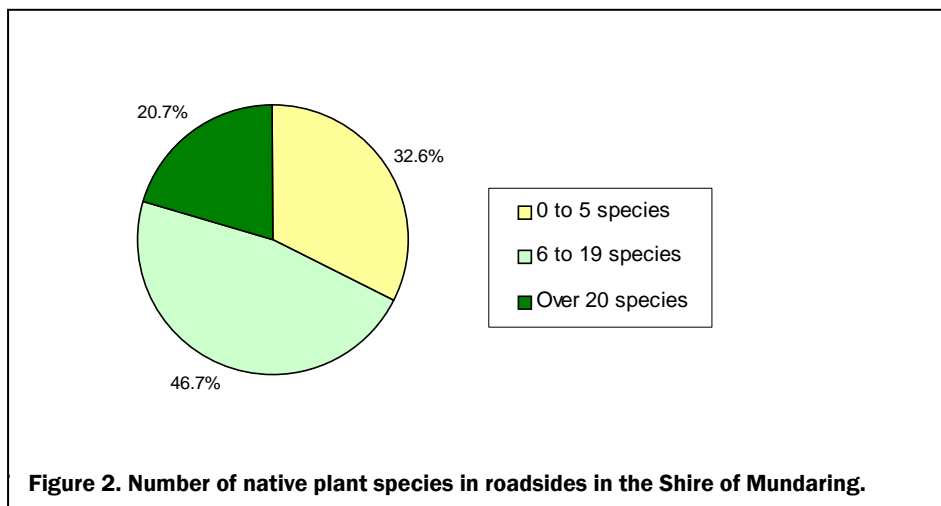


Figure 1. Native vegetation on roadsides in the Shire of Mundaring.

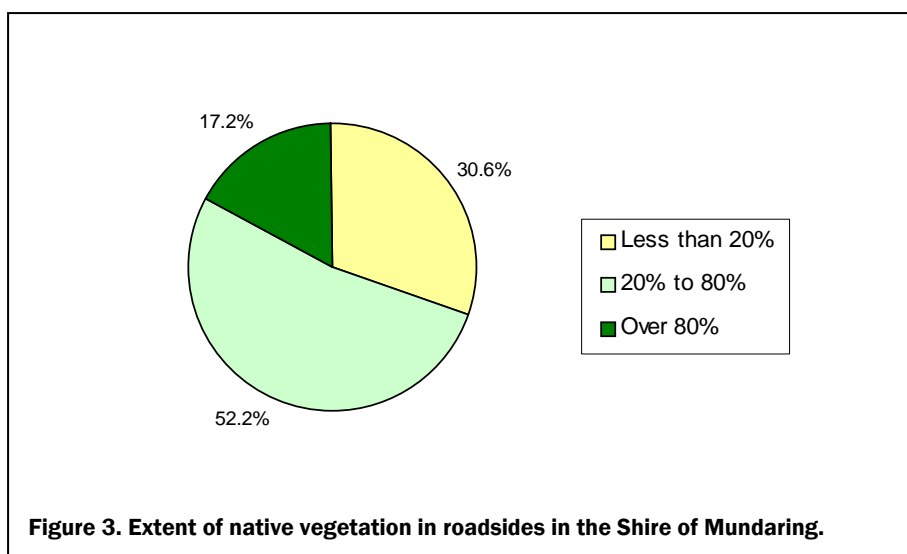
Number of Native Plant Species

The number of native plant species provide a measure of the diversity of the roadside vegetation. Survey sections with over 20 plant species spanned 20.7% (97.0km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 46.7% (219.4km) of the roadside. Almost a third of the roadsides, 32.6% (153.0km) contained 5 or less plant species (Table 2 and Figure 2).



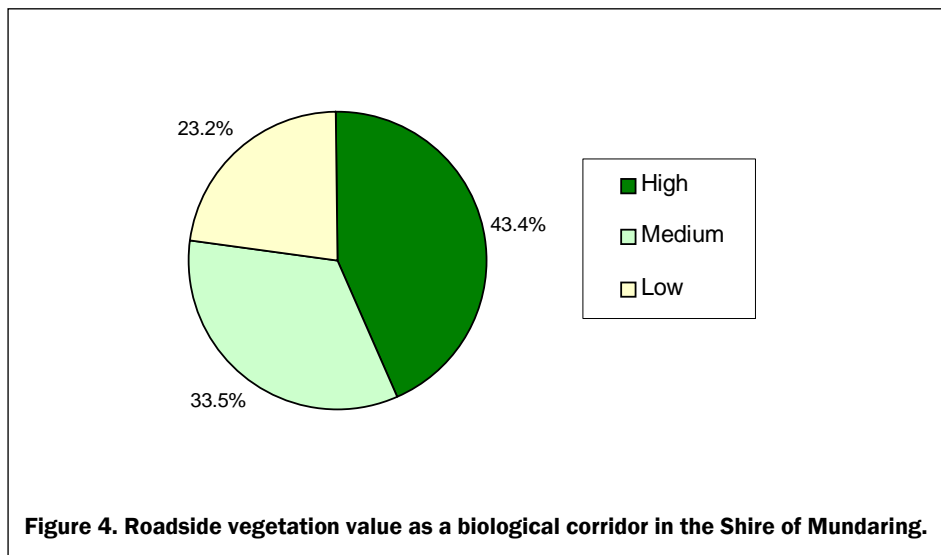
Extent of Native Vegetation

The extent of native vegetation refers to the density 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 17.2% (80.8km) of the roadsides surveyed. Survey sections with medium vegetation cover, i.e. 20% to 80%, accounted for 52.2% (244.9km) of the roadsides. The remaining 30.6% (143.7km) had less than 20% native vegetation and therefore a low 'extent of native vegetation' value (Table 2 and Figure 3).



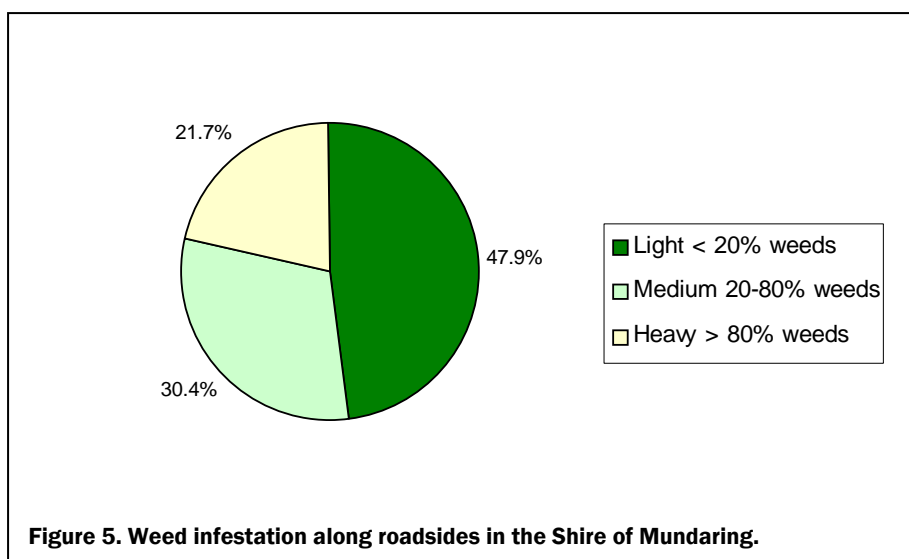
Value as a Biological Corridor

This characteristic considered the presence of four attributes: connection of uncleared areas; presence of flowering shrubs; presence of large trees with hollows; and presence of hollow logs. Roadsides determined to have high value as a biological corridor were present along 43.4% (203.4km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 33.5% (157.2km), and roadsides with low value as a corridor occurred along 23.2% (108.8km) of the roadsides surveyed (Table 2 and Figure 4).



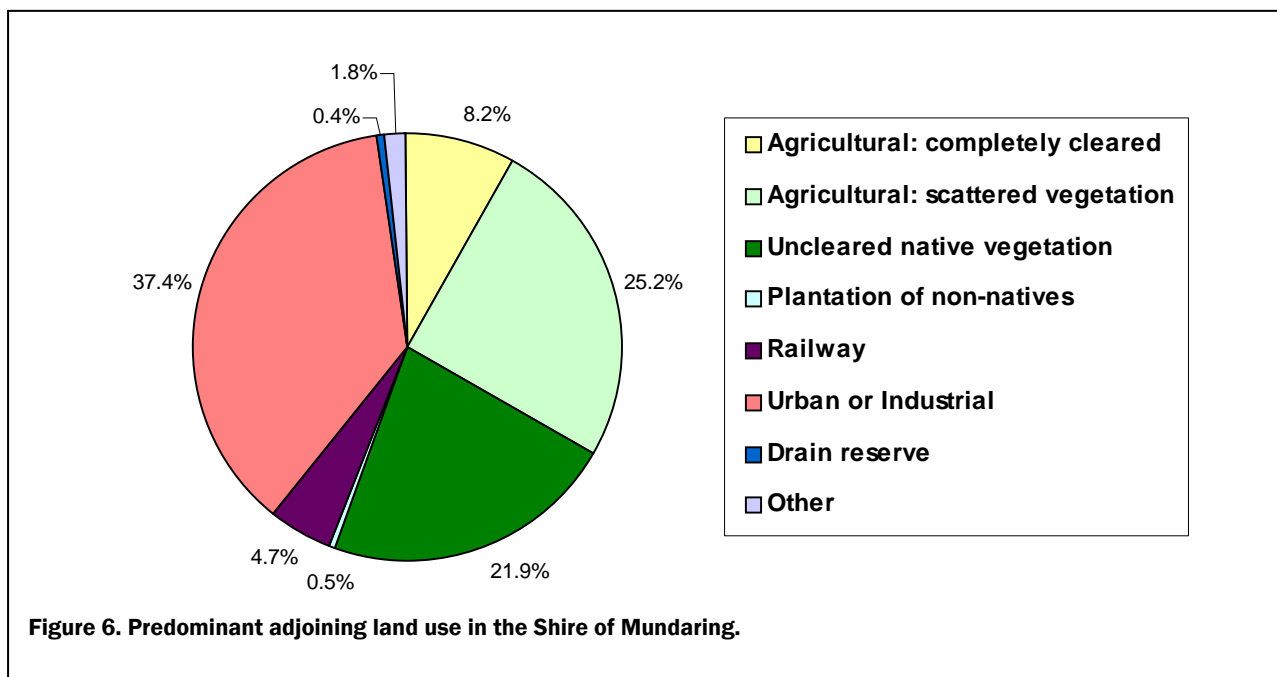
Weed Infestation

Light levels of weed infestation (weeds comprising less than 20% of total plants), were recorded on 47.9% (224.7km) of the roadsides surveyed, medium level weed infestation (weeds comprising 20-80% of the total plants) occurred on 30.4% (142.8km) of the roadsides and 21.7% of roadsides (101.9km) were heavily infested with weeds (weeds comprising more than 80% of the total plants) (Table 2 and Figure 5).



Predominant Adjoining Land Use

Uncleared native vegetation was present on 21.9% (103.0km) of the land adjoining roadsides, whilst 8.2% (38.5km) of roadsides adjoined land that had been completely cleared for agriculture. Land cleared for agriculture, containing a scattered distribution of native vegetation comprised 25.2% (118.2km) of the roadsides. Non-native plantations we found to make up 0.5% (2.2km) of land use adjacent to the road reserves. Railway reserves adjoined 4.7% (21.9km) of the roadsides, urban or industrial land uses adjoined 37.4% (175.4km), roadside drainage reserves made up 0.4% (2.1km), and other land uses were found on 1.8% (8.2km) of the roadsides (Table 2 and Figure 6).

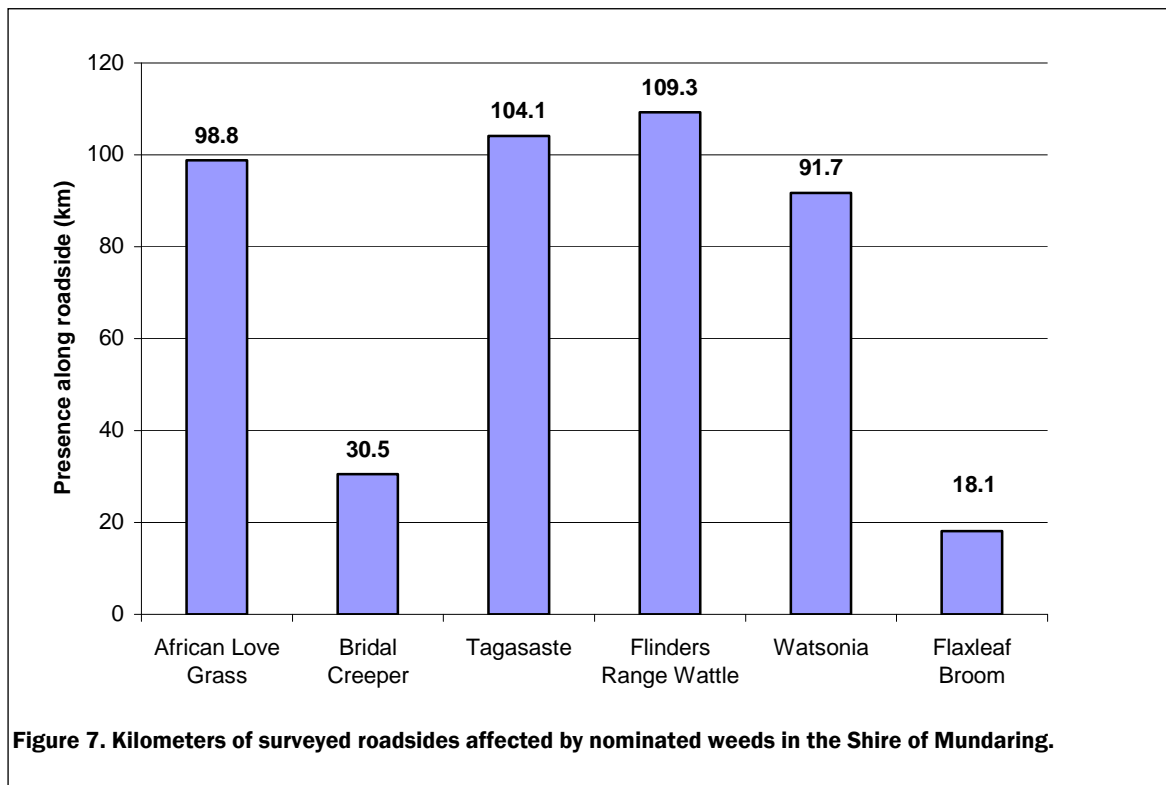


Nominated Weeds

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

- African Lovegrass (*Eragrostis curvula*);
- Bridal Creeper (*Asparagus asparagoides*);
- Flinders Range Wattle (*Acacia iteaphylla*);
- Tagasaste (*Chamaecytisus palmensis*);
- Watsonia (*Watsonia* sp.); and
- Flaxleaf Broom (*Genista linifolia*).

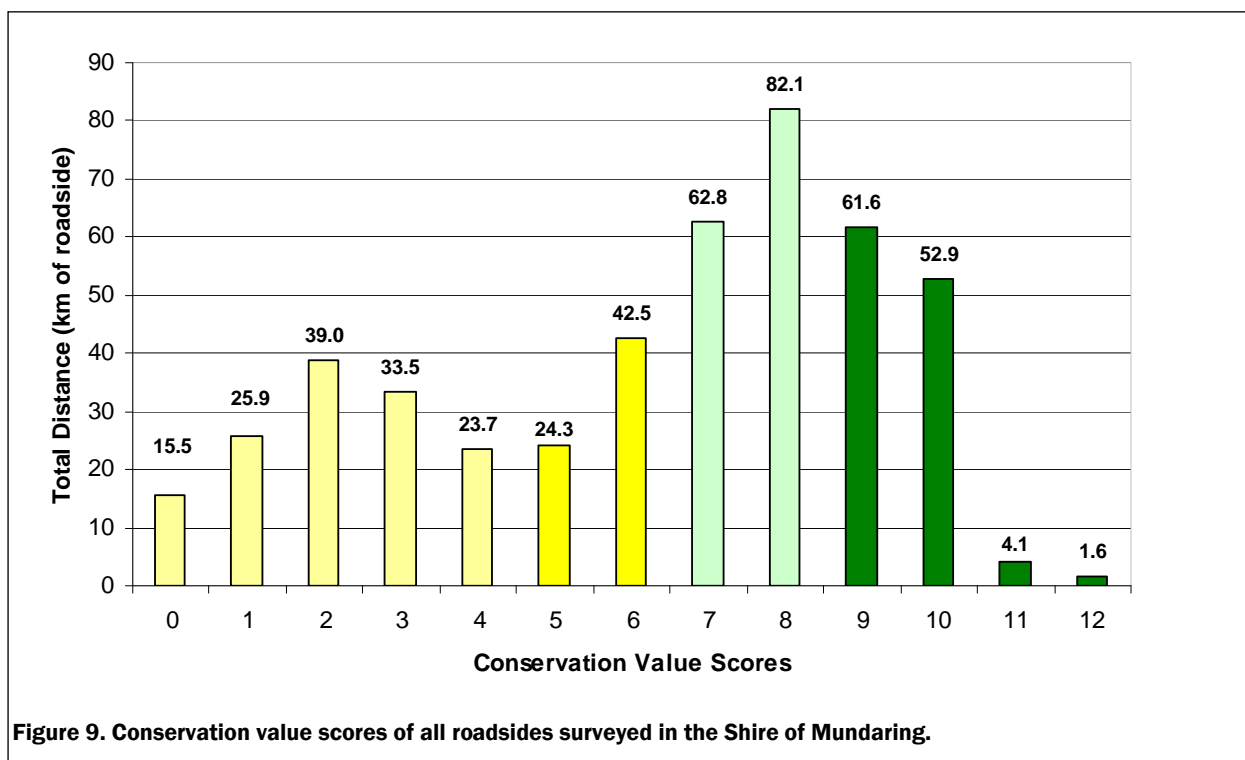
These weeds were only recorded as being present or absent in each roadside section. The density of weed infestations was not recorded and nor was there a separate recording for the left and right sides of the roads. Figure 7 displays the length of roads (km) in which each weed was observed. As such,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



Of the nominated weeds species, the Flinders Range Wattle was the most prevalent, occurring along 109.3km of the roads surveyed. The next most commonly occurring weeds were Tagasaste and African Love Grass, which were present along 104.1 and 98.8km of roads respectively. These were followed by Watsonia, which was present along 91.7km of roads, then Bridal Creeper on 30.5km of roads, and finally Flaxleaf Broom was found on 18.1km of roads (Figure 7). The maps in Figure 8 indicate which roadside sections contained each weed.

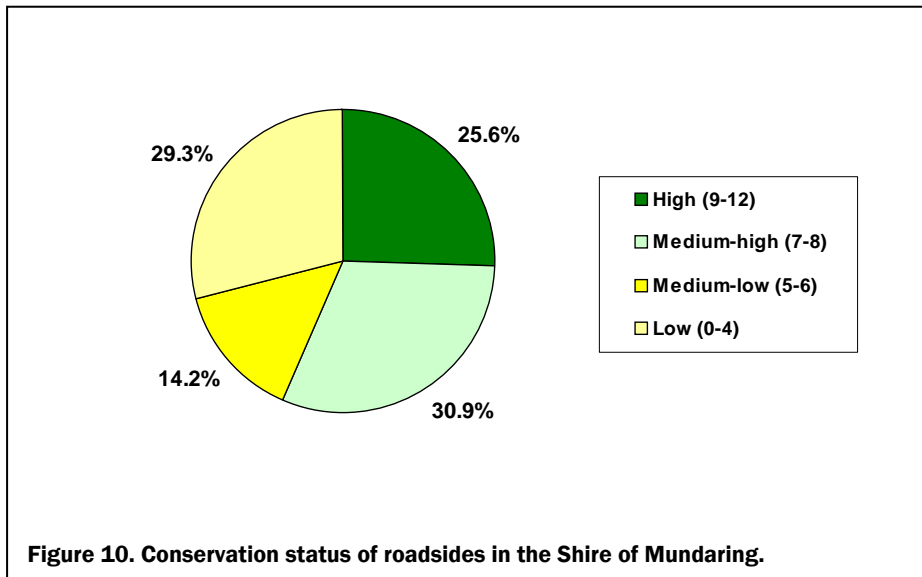
Conservation Value Scores

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 9). The most occurring roadside conservation value score was 8, with 82.1km of roadsides recording this score. Following this, 62.8km of roadsides recorded a score of 7, 61.6km recorded a score of 9 and 52.9km recorded a score of 10. Roadsides with a score of 6 covered 42.5km, a score of 2 covered 39.0km, and roadsides with a score of 3 spanned 33.5km. Roadsides with a score of 1 spanned 25.9km, a score of 5 spanned 24.3km, and roadsides scoring 4 covered 23.7km. A score of 0 spanned 15.5km, a score of 11 covered 4.1km, and 1.6km of roadsides scored 12.



Conservation Status

The conservation status category indicates the combined conservation value of roadsides surveyed in the Shire of Mundaring. Roadside sections of high conservation value covered 25.6% (120.1km) of the roadsides surveyed. Medium-high conservation value roadsides accounted for 30.9% (144.9km) of the total surveyed, medium-low conservation roadside covered 14.2% (66.8km) of the total roadsides surveyed. Roadsides of low conservation value occupied 29.3% (137.6km) of the roadsides surveyed (Table 3 and Figure 10).



Flora Roads

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

Presently the only Flora Road within the Shire of Mundaring is Bailup Rd. However, the roadside survey and the 2008 RCV map highlighted some additional 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 Mundaring include:

- Liberton Road; and
- Werribee Road.

PART D

ROADSIDE MANAGEMENT RECOMMENDATIONS

1.0 Management Recommendations

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

The Executive Officer of the Roadside Conservation Committee is also available to provide assistance on all roadside conservation matters, and can be contacted on (08) 9334 2423. The following RCC publications provide guidelines and management recommendations that will assist Local Government Authorities:

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

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

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

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

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

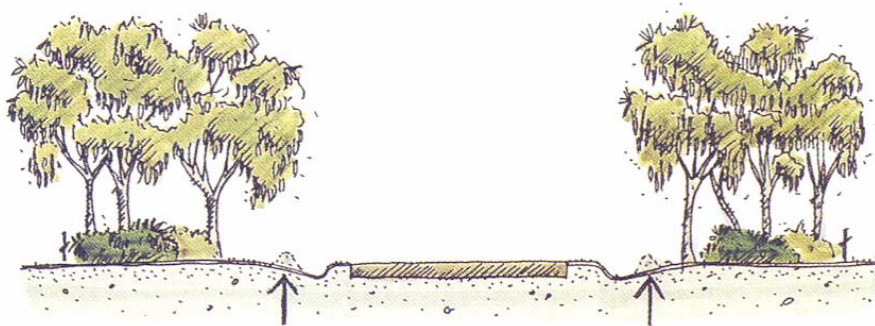
1.3 Improve roadside sections of medium to low conservation value by:

- minimising disturbance caused by machinery, adjoining land practices and incidences of fire;
- carrying out a targeted weed control program;
- retaining remnant trees and shrubs;
- allowing natural regeneration;
- actively rehabilitating the roadside; and
- encouraging revegetation projects on adjacent land.

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 or 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.

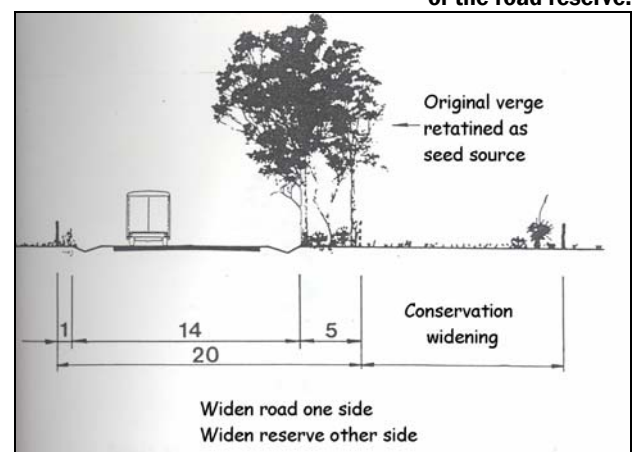


Avoid windrowing drain material into vegetation

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

References

Beeston G, Mlodawski G, Saunders A and True D. (1993, unpub.), *Remnant Vegetation Inventory in the Southern Agricultural Areas of Western Australia*. Western Australian Department of Agriculture, South Perth.

Department of Agriculture WA for Department of Environment (2003), *Salinity Investment Framework Department Interim Report – Phase 1, 2003*, Department of Environment, Salinity and Land Use Impacts Series No. SLUI 32

Department of Agriculture WA (2005), *Salinity in Western Australia*, <http://agspsrv34.agric.wa.gov.au/environment/salinity/>

Department of Environment and Heritage and the Department of Agriculture, Fisheries and Forestry Australia (2003), *Natural Heritage Trust- The Journal of the Natural Heritage Trust* Summer 2003, No 14. Department of Environment and Heritage and the Department of Agriculture, Fisheries and Forestry Australia, Canberra, Australia.

Environment Australia (2001), *National Objectives and Targets for Biodiversity Conservation 2001-2005*. Environment Australia, Canberra, Australia.

Jackson KA (2002), *Assessing Roadsides A Guide to Rating Conservation Value*, Roadside Conservation Committee, Kensington, Western Australia

Lamont DA and Blyth JD (1995), *Roadside corridors and community networks*, pp 425-35. In *Nature Conservation 4: The Role of Networks*, ed by Saunders, D.A., Craig J.L., and Mattiske E.M. Surrey Beatty & Sons, 1995.

Lamont DA (1998), *Western Australian Roadside Handbook: Environmental guidelines for road construction and maintenance workers*. Roadside Conservation Committee, Kensington, Western Australia.

Lamont DA and Atkins K (2000), *Guidelines for Managing Special Environmental Areas in Transport Corridors*. Roadside Conservation Committee, Kensington, Western Australia.

Lloyd S (2004) *Gardennote: Bulb and corm-producing plants that become bushland weeds*, June 2004, No. 16, Department of Agriculture WA.

Platt SJ and Lowe KW (2002), *Biodiversity Action Planning: Action planning for native biodiversity at multiple scales – catchment, bioregional, landscape, local*. Department of Natural Resources and Environment, Melbourne.

Roadside Conservation Committee. (1990), *Roadside Manual* Roadside Conservation Committee, Como WA

Shepherd DP, Beeston GR and Hopkins AJM (2001), *Native Vegetation in Western Australia, Technical Report 249*, Department of Agriculture, Western Australia, South Perth

Western Australian Museum (2005), *Fauna Base*, www.museum.wa.gov.au/faunabase/prod/index.htm

Appendix

1



SURVEY TO DETERMINE THE CONSERVATION VALUE OF ROADSIDES IN THE SHIRE OF _____		Roadside Conservation Committee C/- Locked Bag 104 Bentley Delivery Centre WA 6983		Phone: (08) 9334 0423 Fax: (08) 9334 0199			
Date _____ Observer(s) _____ Road Name _____ Shire _____ Nearest named place _____ Direction of travel (N,S,E,W) _____ Section No. _____ Starting Point _____ Odometer reading _____ Ending Point _____ Odometer reading _____ Length of section _____		No. OF DIFFERENT NATIVE SPECIES 0 – 5 <input type="checkbox"/> <input type="checkbox"/> 6 – 19 <input type="checkbox"/> <input type="checkbox"/> Over 20 <input type="checkbox"/> <input type="checkbox"/> FAUNA OBSERVED <hr/> VALUE AS A BIOLOGICAL CORRIDOR Connects uncleared areas <input type="checkbox"/> <input type="checkbox"/> Flowering shrubs <input type="checkbox"/> <input type="checkbox"/> Large trees with hollows <input type="checkbox"/> <input type="checkbox"/> Hollow logs <input type="checkbox"/> <input type="checkbox"/> PREDOMINANT ADJOINING LANDUSE Agricultural crop or pasture: - Completely cleared <input type="checkbox"/> <input type="checkbox"/> - Scattered <input type="checkbox"/> <input type="checkbox"/> Uncleared land <input type="checkbox"/> <input type="checkbox"/> Plantation of non-native trees <input type="checkbox"/> <input type="checkbox"/> Urban or industrial <input type="checkbox"/> <input type="checkbox"/> Railway Reserve parallel to road <input type="checkbox"/> <input type="checkbox"/> Drain Reserve parallel to road <input type="checkbox"/> <input type="checkbox"/> Other: _____		NOMINATED WEEDS <hr/> < 20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> > 80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> < 20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> > 80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> < 20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> > 80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> < 20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> > 80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> < 20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> > 80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> < 20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> > 80% total weeds <input type="checkbox"/> <input type="checkbox"/> <hr/> < 20% total weeds <input type="checkbox"/> <input type="checkbox"/> 20 – 80% total weeds <input type="checkbox"/> <input type="checkbox"/> 80% total weeds <input type="checkbox"/> <input type="checkbox"/>			
WIDTH OF ROAD RESERVE (m) Side of the road Left Right		UTILITIES / DISTURBANCES Disturbances continuous <input type="checkbox"/> <input type="checkbox"/> Disturbances isolated <input type="checkbox"/> <input type="checkbox"/> Disturbances absent <input type="checkbox"/> <input type="checkbox"/> Type: _____		GENERAL WEEDS Few weeds (<20% total plants) <input type="checkbox"/> <input type="checkbox"/> Half weeds (20 - 80% total) <input type="checkbox"/> <input type="checkbox"/> Mostly weeds (>80% total) <input type="checkbox"/> <input type="checkbox"/> Ground layer totally weeds <input type="checkbox"/> <input type="checkbox"/>		GENERAL COMMENTS <hr/> <hr/>	
WIDTH OF VEGETATED ROADSIDE 1 – 5 m <input type="checkbox"/> <input type="checkbox"/> 5 – 20 m <input type="checkbox"/> <input type="checkbox"/> Over 20 m <input type="checkbox"/> <input type="checkbox"/>		EXTENT OF NATIVE VEGETATION ON ROADSIDE Less than 20% <input type="checkbox"/> <input type="checkbox"/> 20 – 80% <input type="checkbox"/> <input type="checkbox"/> Over 80% <input type="checkbox"/> <input type="checkbox"/>		NATIVE VEGETATION ON ROADSIDE Tree layer <input type="checkbox"/> <input type="checkbox"/> Shrub layer <input type="checkbox"/> <input type="checkbox"/> Ground layer <input type="checkbox"/> <input type="checkbox"/>		OFFICE USE ONLY Conservation value score <input type="checkbox"/> <input type="checkbox"/>	

Appendix

2

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1061153	1	0.00	2.20	2.20	HARDEY RD	South	04-Sep-07	20	1	2	0	1	0	0	0	0	1	2	0	1	2	6	WATSONIA TAGASASTE FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS
1061155	1	0.84	1.94	1.10	GLEN FORREST DR	South	04-Sep-07	20	2	2	0	1	1	1	1	2	1	2	0	0	5	8	FLINDERS_RANGE_WATTLE
1061166	1	0.00	1.30	1.30	MILLS RD	East	12-Sep-07	40	0	2	0	1	1	2	1	2	0	2	0	0	2	9	TAGASASTE FLAXLEAF_BROOM FLINDERS_RANGE_WATTLE
1061176	1	0.31	1.12	0.81	NELSON RD	South	04-Sep-07	20	2	1	1	0	1	0	1	0	2	1	0	0	7	2	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE
1061176	2	1.12	1.27	0.15	NELSON RD	South	04-Sep-07	20	2	2	1	1	2	2	2	2	2	2	0	0	9	9	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1061178	1	0.00	0.64	0.64	HOLBROOK RD	East	12-Sep-07	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1061179	1	0.00	0.65	0.65	JELLICOE RD	East	04-Sep-07	20	2	2	2	2	2	1	2	2	2	2	0	0	10	9	AFRICAN_LOVEGRASS WATSONIA JARRAH HABITAT TREE
1061179	2	0.65	0.88	0.23	JELLICOE RD	East	04-Sep-07	20	2	2	1	1	1	1	2	1	2	2	0	2	8	9	AFRICAN_LOVEGRASS TAGASASTE WATSONIA
1061179	3	0.88	1.60	0.72	JELLICOE RD	East	04-Sep-07	20	1	2	1	1	1	1	2	2	2	1	0	0	7	7	WATSONIA FLINDERS_RANGE_WATTLE WATSONIA
1061192	1	0.00	0.49	0.49	STRETTLE RD	East	12-Sep-07	20	2	2	0	1	2	0	1	2	0	2	0	0	5	7	TAGASASTE AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE WATSONIA FLAXLEAF_BROOM
1061192	2	0.59	1.06	0.47	STRETTLE RD	East	12-Sep-07	20	2	2	1	1	1	1	2	2	1	2	2	2	7	8	TAGASASTE AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE WATSONIA FLAXLEAF_BROOM
1061192	3	1.06	1.60	0.54	STRETTLE RD	East	12-Sep-07	20	2	0	2	0	2	0	2	0	2	1	0	0	10	1	AFRICAN_LOVEGRASS
1061192	4	1.60	1.97	0.37	STRETTLE RD	East	12-Sep-07	40	2	2	2	1	2	1	2	2	2	2	0	0	10	8	AFRICAN_LOVEGRASS
1061192	5	1.97	2.44	0.47	STRETTLE RD	East	12-Sep-07	40	2	2	0	1	0	2	0	2	0	2	0	0	2	9	FLAXLEAF_BROOM WATSONIA

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)		
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right	Left
1061192	6	2.44	2.83	0.39	STRETTLE RD	East	12-Sep-07	40	2	2	0	2	1	2	1	2	0	2	0	0	4	10	FLAXLEAF_BROOM WATSONIA FLINDERS_RANGE_WATTLE		
1061192	7	2.83	3.23	0.40	STRETTLE RD	East	12-Sep-07	40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	FLINDERS_RANGE_WATTLE BRIDAL_CREEPER
1061193	1	0.00	0.59	0.59	BAILEY RD	South	04-Sep-07	20	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	TAGASASTE AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE FLAXLEAF_BROOM JARRAH HABITAT TREE
1061193	2	0.59	1.31	0.72	BAILEY RD	South	04-Sep-07	20	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	TAGASASTE AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE FLAXLEAF_BROOM JARRAH HABITAT TREE
1061193	3	1.31	1.61	0.30	BAILEY RD	South	04-Sep-07	20	2	2	1	1	1	1	1	1	2	0	0	0	0	7	5	JARRAH HABITAT TREE	
1062001	1	0.00	0.29	0.29	PARK RD	North	07-Sep-07	20	2	2	2	1	2	1	2	2	2	2	0	0	10	8	FLAXLEAF_BROOM AFRICAN_LOVEGRASS WATSONIA JARRAH HABITAT TREE		
1062001	2	0.29	0.89	0.60	PARK RD	North	07-Sep-07	20	2	2	2	1	2	1	2	2	2	1	0	0	10	7	FLAXLEAF_BROOM TAGASASTE AFRICAN_LOVEGRASS WATSONIA JARRAH HABITAT TREE		
1062001	3	0.89	1.34	0.45	PARK RD	North	07-Sep-07	20	2	1	0	0	1	0	2	1	1	0	0	0	6	2	TAGASASTE AFRICAN_LOVEGRASS		
1062001	4	1.34	1.63	0.29	PARK RD	North	07-Sep-07	20	2	2	1	0	1	0	2	0	2	0	0	0	8	2	AFRICAN_LOVEGRASS		
1062001	5	1.63	2.13	0.50	PARK RD	North	07-Sep-07	20	1	1	0	0	0	0	0	1	0	2	2	4	3	FLAXLEAF_BROOM WATSONIA			
1062002	1	1.24	1.87	0.63	OXLEY RD	East	12-Sep-07	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	WATSONIA JARRAH HABITAT TREE		
1062004	1	0.00	0.90	0.90	MARGARET RD	North	18-Sep-07	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	TAGASASTE FLINDERS_RANGE_WATTLE BRIDAL_CREEPER AFRICAN_LOVEGRASS		
1062004	2	0.90	1.55	0.65	MARGARET RD	North	18-Sep-07	20	1	1	2	1	0	1	0	2	0	2	1	1	9	3	WATSONIA AFRICAN_LOVEGRASS JARRAH HABITAT TREE		

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									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
1062007	1	0.00	1.02	1.02	WILSON RD	West	17-Oct-07	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9		
1062017	1	0.00	0.51	0.51	BROOKING RD	South	24-Oct-07	20	2	2	0	0	0	0	1	1	2	1	0	0	5	4	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS WATSONIA JARRAH HABITAT TREE	
1062017	2	0.51	1.47	0.96	BROOKING RD	South	24-Oct-07	20	2	2	1	1	2	2	2	2	2	2	0	0	9	9	FLAXLEAF_BROOM TAGASASTE WATSONIA AFRICAN_LOVEGRASS	
1062017	3	1.47	2.46	0.99	BROOKING RD	South	24-Oct-07	20	1	2	0	0	0	0	0	0	2	2	0	0	3	4	FLAXLEAF_BROOM TAGASASTE WATSONIA AFRICAN_LOVEGRASS JARRAH HABITAT TREE	
1062018	1	0.00	2.01	2.01	FALLS RD	West	17-Oct-07	20	1	2	0	2	0	1	1	2	0	1	1	0	3	8	WATSONIA	
1062019	1	0.00	0.32	0.32	GLIDDON RD	South	17-Oct-07	20	0	1	0	0	1	1	1	1	0	0	0	0	2	3		
1062020	1	3.05	3.53	0.48	RICHARDSON RD	West	17-Oct-07	20	1	1	1	1	0	0	0	1	0	0	0	2	2	5	BRIDAL_CREEPER WATSONIA	
1062020	2	3.53	4.85	1.32	RICHARDSON RD	West	17-Oct-07	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8		
1062022	1	0.00	2.13	2.13	SEABORNE ST	South	24-Oct-07	20	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	FLINDERS_RANGE_WATTLE TAGASASTE WATSONIA AFRICAN_LOVEGRASS JARRAH HABITAT TREE
1062023	1	0.00	0.35	0.35	DEVON PL	West	24-Oct-07	20	0	1	0	0	0	0	0	0	0	1	0	0	0	2	2	WATSONIA BRIDAL_CREEPER JARRAH HABITAT TREE
1062024	1	0.00	0.92	0.92	HILL RD	West	24-Oct-07	20	2	2	1	1	1	1	1	1	1	2	0	0	6	7	FLAXLEAF_BROOM WATSONIA FLINDERS_RANGE_WATTLE TAGASASTE JARRAH HABITAT TREE	
1062025	1	0.00	1.14	1.14	PARKER RD	South West	24-Oct-07	20	1	2	0	0	0	1	0	1	1	2	0	0	2	6	TAGASASTE WATSONIA FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1062035	1	0.00	0.60	0.60	KINTORE RD	North	24-Oct-07	20	1	2	0	0	0	0	0	0	0	1	0	0	1	3	FLINDERS_RANGE_WATTLE TAGASASTE WATSONIA AFRICAN_LOVEGRASS JARRAH HABITAT TREE	

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									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1062035	2	0.88	2.10	1.23	KINTORE RD	North	24-Oct-07	20	1	2	0	1	0	1	1	1	1	0	0	3	6	AFRICAN_LOVEGRASS TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1062036	1	0.00	0.50	0.50	DARTNALL RD	West	24-Oct-07	20	2	2	1	1	2	2	2	2	2	0	0	9	9	FLINDERS_RANGE_WATTLE WATSONIA JARRAH HABITAT TREE	
1062036	2	0.50	1.19	0.69	DARTNALL RD	West	24-Oct-07	20	2	1	1	0	1	0	1	1	0	0	2	2	5	2	FLINDERS_RANGE_WATTLE WATSONIA AFRICAN_LOVEGRASS
1062037	1	0.00	0.27	0.27	REDFERN RD	East	24-Oct-07	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	FLINDERS_RANGE_WATTLE TAGASASTE
1062038	1	0.00	0.39	0.39	GLENDOWER ST	West	24-Oct-07	20	2	2	0	0	0	0	1	1	0	1	0	0	3	4	TAGASASTE BRIDAL_CREEPER FLINDERS_RANGE_WATTLE WATSONIA JARRAH HABITAT TREE
1062042	1	0.00	1.10	1.10	JOHNSTON RD	East	24-Oct-07	20	1	0	0	0	0	0	0	0	1	2	0	0	2	2	AFRICAN_LOVEGRASS WATSONIA FLINDERS_RANGE_WATTLE BRIDAL_CREEPER TAGASASTE JARRAH HABITAT TREE
1062045	1	0.00	0.81	0.81	CLIFTON RD	West	24-Oct-07	20	2	2	2	2	2	2	2	2	2	0	0	10	10	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1062049	1	0.00	0.29	0.29	SMEATON RD	South	24-Oct-07	20	1	2	1	1	1	1	2	2	1	2	0	0	6	8	WATSONIA BRIDAL_CREEPER TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1062050	1	0.00	0.42	0.42	GRANITE RD	North	24-Oct-07	20	1	1	0	0	0	0	1	1	1	2	0	0	3	4	BRIDAL_CREEPER TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1062050	2	0.42	1.12	0.70	GRANITE RD	North	24-Oct-07	20	2	1	0	0	0	0	0	0	1	1	0	0	3	2	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE

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									Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right		Left
1062051	1	0.00	0.60	0.60	BRINDLE RD	North	24-Oct-07	20	1	2	1	1	0	0	0	0	2	2	2	2	4	5	FLINDERS_RANGE_WATTLE TAGASASTE AFRICAN_LOVEGRASS WATSONIA JARRAH HABITAT TREE	
1062053	1	0.00	2.21	2.21	GILL ST	South	24-Oct-07	20	2	2	0	0	0	0	0	0	1	0	0	0	3	2	AFRICAN_LOVEGRASS TAGASASTE WATSONIA FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1062056	1	0.00	0.84	0.84	LACEY RD	South	24-Oct-07	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	WATSONIA TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1062056	2	0.84	1.84	1.00	LACEY RD	South	24-Oct-07	20	2	2	1	1	1	1	1	1	1	2	0	0	6	7	FLINDERS_RANGE_WATTLE WATSONIA TAGASASTE JARRAH HABITAT TREE	
1062058	1	0.00	0.68	0.68	SCHOCH RD	North	24-Oct-07	20	2	2	1	1	1	1	2	2	1	1	0	0	7	7	FLINDERS_RANGE_WATTLE TAGASASTE JARRAH HABITAT TREE	
1062066	1	1.17	1.37	0.20	STONEVILLE RD	North	15/11/2007	20	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	FLINDERS_RANGE_WATTLE
1062066	2	1.37	2.17	0.80	STONEVILLE RD	North	15/11/2007	20	1	1	1	1	0	0	0	0	0	0	0	0	2	2	FLINDERS_RANGE_WATTLE TAGASASTE	
1062066	3	2.17	2.67	0.50	STONEVILLE RD	North	15/11/2007	20	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	FLINDERS_RANGE_WATTLE
1062066	4	2.67	3.22	0.55	STONEVILLE RD	North	15/11/2007	20	1	0	1	0	0	0	0	0	0	0	1	0	3	0	TAGASASTE WATSONIA	
1062066	5	3.22	3.87	0.65	STONEVILLE RD	North	15/11/2007	20	1	0	0	0	0	0	0	0	0	0	1	0	2	0	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS	
1062066	6	3.87	4.41	0.54	STONEVILLE RD	North	15/11/2007	20	1	0	1	0	1	0	1	1	1	1	1	1	6	3	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS	
1062066	7	4.41	4.88	0.47	STONEVILLE RD	North	15/11/2007	20	0	0	0	1	0	1	0	1	1	1	1	1	2	5	FLINDERS_RANGE_WATTLE WATSONIA AFRICAN_LOVEGRASS TAGASASTE	
1062066	8	4.88	6.32	1.44	STONEVILLE RD	North	15/11/2007	20	2	2	2	1	2	2	2	1	1	2	0	1	9	9	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE TAGASASTE	
1062066	9	6.32	6.76	0.44	STONEVILLE RD	North	15/11/2007	20	2	2	2	1	2	2	1	1	2	0	0	1	9	7	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE TAGASASTE	

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									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1062066	10	6.76	7.19	0.43	STONEVILLE RD	North	15/11/2007	20	2	2	2	2	2	2	2	2	1	1	0	1	9	10	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS
1062066	11	7.19	7.91	0.72	STONEVILLE RD	North	15/11/2007	20	2	2	2	2	2	2	2	2	1	2	0	0	9	10	FLINDERS_RANGE_WATTLE
1062085	1	0.00	0.86	0.86	CAMERON RD	East	17-Sep-07	20	2	2	0	0	1	1	2	2	2	1	2	2	9	6	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS WATSONIA TAGASASTE
1062085	2	0.86	2.93	2.07	CAMERON RD	East	17-Sep-07	20	2	2	1	1	2	2	2	2	2	2	0	1	9	10	JARRAH HABITAT TREE
1062095	1	0.00	0.30	0.30	JARRAH RD	South East	15-Nov-07	20	1	1	1	1	1	0	1	1	1	1	1	1	6	5	AFRICAN_LOVEGRASS
1062095	2	0.30	1.29	0.99	JARRAH RD	South East	15-Nov-07	20	1	0	1	1	0	1	0	1	0	0	1	0	3	3	FLINDERS_RANGE_WATTLE TAGASASTE
1062095	3	1.29	1.95	0.66	JARRAH RD	South	15-Nov-07	20	0	2	0	1	0	1	0	1	1	0	1	0	2	5	FLINDERS_RANGE_WATTLE TAGASASTE WATSONIA
1062097	1	2.01	2.21	0.20	TRAYLEN RD EAST	East	16-Oct-07	20	2	2	2	2	1	1	1	1	1	0	0	2	7	8	WATSONIA FLINDERS_RANGE_WATTLE
1062097	2	2.21	2.41	0.20	TRAYLEN RD EAST	East	16-Oct-07	20	2	2	2	2	2	2	2	2	1	2	2	2	11	12	
1062098	1	0.00	0.63	0.63	MULUMBA PL	East	15-Nov-07	20	1	0	1	0	1	0	1	0	1	1	1	1	6	2	FLINDERS_RANGE_WATTLE
1062099	1	0.00	0.56	0.56	CARSON ST	East	15-Nov-07	20	2	2	1	2	2	2	1	2	2	2	1	1	9	11	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1062107	1	0.00	0.38	0.38	EAGLE ST	North	15-Nov-07	20	2	2	2	2	2	1	2	2	1	1	0	1	9	9	JARRAH HABITAT TREE
1062107	2	0.38	0.81	0.43	EAGLE ST	North	15-Nov-07	20	2	2	1	1	1	1	1	1	0	0	1	1	6	6	TAGASASTE WATSONIA
1062109	1	0.00	2.28	2.28	RAILWAY TCE WEST	East	26-Sep-07	20	2	2	1	1	0	1	1	1	1	2	0	1	5	8	WATSONIA FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS TAGASASTE JARRAH HABITAT TREE
1062112	1	0.00	0.60	0.60	STONELEIGH RD	West	26-Sep-07	20	2	2	0	1	0	1	1	1	2	1	0	0	5	6	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE TAGASASTE WATSONIA
1062112	2	0.60	1.23	0.63	STONELEIGH RD	West	26-Sep-07	20	2	2	1	1	1	1	0	2	2	2	0	0	6	8	FLINDERS_RANGE_WATTLE TAGASASTE
1062114	1	0.00	1.13	1.13	FORREST ST	North West	26-Sep-07	20	1	1	0	0	0	0	1	1	1	2	0	0	3	4	FLAXLEAF_BROOM TAGASASTE FLINDERS_RANGE_WATTLE WATSONIA

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
1062115	1	0.00	0.67	0.67	LACEY ST	East	26-Sep-07	20	0	1	0	0	0	0	0	0	2	0	0	0	0	0	3	WATSONIA AFRICAN_LOVEGRASS TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1062116	1	0.00	0.22	0.22	EASON RD	West	26-Sep-07	20	2	2	1	1	0	0	1	1	1	1	0	0	5	5	WATSONIA AFRICAN_LOVEGRASS TAGASASTE JARRAH HABITAT TREE	
1062116	2	0.22	0.77	0.55	EASON RD	West	26-Sep-07	20	2	2	0	0	0	0	1	1	1	1	0	0	4	4	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS BRIDAL_CREEPER JARRAH HABITAT TREE	
1062117	1	0.00	0.74	0.74	GOSLIN ST	East	26-Sep-07	20	0	2	0	1	0	1	1	1	0	1	0	0	1	6	6	TAGASASTE JARRAH HABITAT TREE
1062121	1	0.00	0.63	0.63	OLIVER ST	West	26-Sep-07	20	0	2	0	1	0	1	0	1	0	2	0	0	0	7	7	FLINDERS_RANGE_WATTLE TAGASASTE WATSONIA
1062123	1	0.00	0.20	0.20	STRETCH RD	North	16-Oct-07	20	1	1	0	1	0	0	0	1	1	2	0	4	3	3	TAGASASTE WATSONIA JARRAH HABITAT TREE	
1062123	2	0.20	0.50	0.30	STRETCH RD	North	16-Oct-07	20	2	1	1	1	1	1	1	1	1	2	0	8	5	5	TAGASASTE AFRICAN_LOVEGRASS FLAXLEAF_BROOM JARRAH HABITAT TREE	
1062123	3	0.50	0.70	0.20	STRETCH RD	North	16-Oct-07	20	2	2	2	2	0	0	2	2	2	0	1	0	9	6	6	TAGASASTE JARRAH HABITAT TREE
1062123	4	0.70	1.00	0.30	STRETCH RD	North	16-Oct-07	20	2	2	2	2	1	1	1	1	0	1	2	2	8	9	9	TAGASASTE
1062123	5	1.00	1.20	0.20	STRETCH RD	North	16-Oct-07	20	1	2	1	2	1	2	2	2	1	1	2	2	8	11		
1062124	1	0.00	0.30	0.30	HALLET RD	West	24-Oct-07	20	2	2	1	1	1	1	2	2	1	2	0	0	7	8	8	WATSONIA FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1062125	1	0.00	0.43	0.43	PROSPERITY RD WEST	West	16-Oct-07	20	2	2	2	2	1	1	2	2	1	0	1	1	9	8	8	WATSONIA
1062125	2	0.43	0.97	0.54	PROSPERITY RD WEST	West	16-Oct-07	20	2	1	2	1	1	0	2	1	1	0	0	1	8	4	4	TAGASASTE WATSONIA BRIDAL_CREEPER FLINDERS_RANGE_WATTLE
1062132	1	0.00	0.39	0.39	ANTHONY PL	East	16-Oct-07	0	2	1	2	2	1	1	2	2	1	2	0	2	8	10		

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1062140	1	0.00	0.43	0.43	HOUSTON ST	East	15-Nov-07	20	2	2	1	1	1	1	1	1	0	0	1	1	6	6	WATSONIA AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE TAGASASTE
1062140	2	0.43	0.78	0.35	HOUSTON ST	East	15-Nov-07	20	2	2	2	1	2	1	2	1	2	0	0	1	10	6	WATSONIA AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE TAGASASTE
1062140	3	0.78	1.09	0.31	HOUSTON ST	East	15-Nov-07	20	2	2	2	2	1	2	2	2	1	1	0	0	8	9	
1062150	1	0.00	0.55	0.55	BOYAMYNE RD	West	17-Oct-07	20	2	2	0	0	0	0	0	2	0	0	1	0	3	4	
1062150	2	0.55	1.16	0.61	BOYAMYNE RD	West	17-Oct-07	20	1	1	1	0	1	0	0	2	1	1	1	0	5	4	
1062150	3	1.16	1.59	0.43	BOYAMYNE RD	West	17-Oct-07	20	1	0	0	0	0	0	2	2	0	0	0	0	3	2	
1062151	1	0.00	0.28	0.28	KURAMUN PL	West	17-Oct-07	20	0	0	0	0	0	0	1	1	0	0	1	1	2	2	
1062152	1	0.00	0.50	0.50	ESTELLE PCE	North	17-Oct-07	20	1	1	1	1	0	0	2	2	1	1	0	0	5	5	
1062156	1	0.00	1.14	1.14	HIDDEN VALLEY RD	West	17-Oct-07	20	1	1	1	1	1	1	2	2	1	1	1	1	7	7	
1062156	2	1.14	1.72	0.58	HIDDEN VALLEY RD	West	17-Oct-07	20	1	1	0	0	0	0	2	2	0	0	0	0	3	3	
1062157	1	0.00	0.23	0.23	HIGGINSON RD	West	16-Oct-07	20	2	1	2	1	1	0	2	0	2	1	1	2	10	5	TAGASASTE
1062157	2	0.23	0.87	0.64	HIGGINSON RD	West	16-Oct-07	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	TAGASASTE JARRAH HABITAT TREE
1062158	1	0.00	0.80	0.80	LA GRANGE RD	West	15-Nov-07	20	0	0	0	0	0	0	0	2	0	0	1	1	1	3	
1062158	2	0.80	1.36	0.56	LA GRANGE RD	West	15-Nov-07	20	0	0	0	0	0	0	0	1	0	0	1	1	1	2	TAGASASTE AFRICAN_LOVEGRASS
1062159	1	0.00	0.66	0.66	SUNSET WY	South	15-Nov-07	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE TAGASASTE
1062503	1	0.00	0.30	0.30	RICKARD RD	East	04-Sep-07	20	2	1	1	0	1	0	2	0	2	1	0	0	8	2	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE
1062503	2	0.30	0.44	0.14	RICKARD RD	East	07-Sep-07	20	0	0	0	0	0	0	0	0	0	0	2	0	2	0	FLINDERS_RANGE_WATTLE
1062506	1	0.00	0.40	0.40	MOOLA RD	South	12-Sep-07	40	2	2	1	1	1	1	2	2	1	0	2	2	7	6	FLINDERS_RANGE_WATTLE
1062506	2	0.40	2.25	1.85	MOOLA RD	South	12-Sep-07	40	2	2	2	2	1	1	2	2	1	2	0	0	8	9	

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1062514	1	0.00	0.80	0.80	O'CONNOR RD	South	12-Sep-07	40	0	1	0	0	0	0	0	1	2	0	0	1	3	WATSONIA FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS JARRAH HABITAT TREE	
1062516	1	0.00	0.34	0.34	YELVERTON RD 358	South	12-Sep-07	40	2	0	1	0	2	0	1	0	1	0	2	2	7	0	WATSONIA FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS
1062518	1	0.00	0.80	0.80	CHARLES RD	South	12-Sep-07	40	1	0	0	0	0	0	0	2	1	0	0	3	1	FLAXLEAF_BROOM TAGASASTE AFRICAN_LOVEGRASS WATSONIA FLINDERS_RANGE_WATTLE	
1062520	1	0.00	0.68	0.68	PHILIPS RD	East	04-Sep-07	40	2	0	2	0	2	2	2	1	2	1	0	0	10	4	WATSONIA AFRICAN_LOVEGRASS TAGASASTE FLAXLEAF_BROOM
1062520	2	0.68	2.58	1.90	PHILIPS RD	East	04-Sep-07	40	2	2	2	1	2	2	2	1	2	0	0	0	10	6	WATSONIA AFRICAN_LOVEGRASS TAGASASTE FLAXLEAF_BROOM JARRAH HABITAT TREE
1062521	1	0.00	0.39	0.39	JACOBY RD	West	04-Sep-07	0	2	2	2	1	2	2	2	1	2	2	0	0	10	8	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1062521	2	0.39	0.93	0.54	JACOBY RD	West	04-Sep-07	0	2	0	2	0	2	0	2	0	2	0	0	0	10	0	AFRICAN_LOVEGRASS WATSONIA FLINDERS_RANGE_WATTLE TAGASASTE JARRAH HABITAT TREE
1062521	3	0.93	1.37	0.44	JACOBY RD	West	04-Sep-07	40	2	0	0	0	1	0	2	2	2	0	1	0	8	2	AFRICAN_LOVEGRASS WATSONIA FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1062521	4	1.37	4.24	2.87	JACOBY RD	West	04-Sep-07	40	2	0	2	0	2	2	2	1	2	1	0	0	10	4	AFRICAN_LOVEGRASS WATSONIA FLINDERS_RANGE_WATTLE FLAXLEAF_BROOM TAGASASTE
1062524	1	0.00	0.72	0.72	VERNON AV	East	31-Oct-07	20	2	2	1	1	1	1	2	2	1	2	1	0	8	8	

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
									Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right		Left
1062525	1	0.00	0.31	0.31	COOLGARDIE ST	South	31-Oct-07	20	0	0	0	0	0	0	2	2	0	0	0	0	2	2	AFRICAN_LOVEGRASS	
1062525	2	0.31	0.54	0.23	COOLGARDIE ST	South	31-Oct-07	20	0	1	0	0	0	0	2	2	0	0	0	0	2	3	AFRICAN_LOVEGRASS TREE_WEEDS	
1062525	3	0.54	1.55	1.01	COOLGARDIE ST	South	31-Oct-07	20	1	0	1	1	1	1	2	2	1	1	0	0	7	6	TREE_WEEDS AFRICAN_LOVEGRASS JARRAH HABITAT TREE	
1062525	4	1.55	2.69	1.14	COOLGARDIE ST	South	31-Oct-07	20	0	1	1	1	1	1	2	2	2	2	0	0	6	7	TREE_WEEDS AFRICAN_LOVEGRASS	
1062538	1	0.00	1.43	1.43	MUNDARING WEIR RD	South	31-Oct-07	20	2	0	0	0	0	0	1	1	0	0	1	0	4	1	WATSONIA JARRAH HABITAT TREE	
1062538	2	1.43	4.14	2.71	MUNDARING WEIR RD	South	31-Oct-07	20	2	2	1	1	1	1	2	2	2	2	1	0	9	8	WATSONIA JARRAH HABITAT TREE	
1062538	3	4.14	7.48	3.34	MUNDARING WEIR RD	South	31-Oct-07	20	2	1	1	0	1	0	1	1	2	0	1	1	8	3	AFRICAN_LOVEGRASS	
1062563	1	0.00	0.25	0.25	CROMWELL RD	East	16-Oct-07	20	2	2	1	2	0	1	1	2	1	1	2	0	7	8	TAGASASTE	
1062563	2	0.25	0.62	0.37	CROMWELL RD	East	16-Oct-07	20	1	0	0	0	0	0	0	0	0	0	1	1	2	0	FLINDERS_RANGE_WATTLE TAGASASTE	
1062576	1	0.00	0.31	0.31	MUELLER RD	East	17-Sep-07	20	2	2	1	1	1	1	2	2	2	2	1	1	9	9	JARRAH HABITAT TREE	
1062577	1	0.00	1.23	1.23	BUSHLANDS RD	North	18-Sep-07	20	2	2	1	1	1	2	2	2	2	2	0	0	8	9	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1062587	1	0.00	0.27	0.27	LYON PL	South	07-Sep-07	20	2	2	0	2	0	2	0	2	0	2	2	2	3	10	WATSONIA JARRAH HABITAT TREE	
1062588	1	0.00	0.34	0.34	GLENROY CT	North	07-Sep-07	20	2	2	1	1	0	1	0	0	0	2	0	0	3	6	TAGASASTE	
1062589	1	0.00	0.23	0.23	FERN HILL RD	South	18-Sep-07	20	2	2	0	1	1	2	2	2	2	2	0	0	7	9	JARRAH HABITAT TREE	
1062598	1	0.00	1.02	1.02	PEARTREE LANE	North	24-Oct-07	20	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	AFRICAN_LOVEGRASS
1063005	1	0.00	0.30	0.30	BARKALA WY	East	17-Sep-07	20	2	2	0	0	0	0	0	0	1	0	0	0	3	2	TAGASASTE FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS JARRAH HABITAT TREE	
1063005	2	0.30	0.70	0.40	BARKALA WY	East	17-Sep-07	20	2	2	1	1	1	1	2	2	0	1	0	0	6	7	AFRICAN_LOVEGRASS TAGASASTE	
1063005	3	0.70	1.07	0.37	BARKALA WY	East	17-Sep-07	20	1	1	0	0	0	0	0	0	0	0	0	0	1	1	AFRICAN_LOVEGRASS TAGASASTE	
1063008	1	0.00	0.50	0.50	ANKETELL RD	West	17-Sep-07	20	2	2	0	1	0	1	1	1	1	1	0	0	4	6	FLINDERS_RANGE_WATTLE TAGASASTE AFRICAN_LOVEGRASS	

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
1063008	2	0.50	2.18	1.68	ANKETELL RD	West	17-Sep-07	20	2	2	0	0	1	1	1	1	1	2	0	0	5	6	FLINDERS_RANGE_WATTLE WATSONIA AFRICAN_LOVEGRASS
1063009	1	0.00	0.45	0.45	LAPOINYA PL	North	17-Sep-07	20	2	2	0	0	0	0	1	1	1	1	0	0	4	4	FLINDERS_RANGE_WATTLE
1063014	1	0.00	0.52	0.52	TANNAH WY	North	17-Sep-07	20	0	1	0	0	0	0	0	0	1	1	0	0	1	2	AFRICAN_LOVEGRASS
1063015	1	0.00	0.45	0.45	PROSPERITY RD EAST	East	16-Oct-07	20	2	2	1	1	1	1	1	2	0	0	1	1	6	7	FLINDERS_RANGE_WATTLE
1063015	2	0.45	1.19	0.74	PROSPERITY RD EAST	East	16-Oct-07	20	0	2	0	2	0	1	0	2	0	1	1	0	1	8	WATSONIA TAGASASTE
1063016	1	0.00	0.53	0.53	SHORT ST	North	16-Oct-07	20	2	0	1	0	0	0	1	0	0	0	1	1	5	1	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE
1063016	2	0.53	1.08	0.55	SHORT ST	North	16-Oct-07	20	2	0	2	0	1	0	2	0	2	0	1	1	10	1	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063016	3	1.08	1.28	0.20	SHORT ST	North	16-Oct-07	20	2	2	2	2	1	1	2	2	1	1	0	0	8	8	
1063016	4	1.28	1.78	0.50	SHORT ST	North	16-Oct-07	20	2	2	2	2	1	1	2	2	2	1	1	1	10	9	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063018	1	0.00	0.20	0.20	BEDFORD ST	North	16-Oct-07	20	2	2	1	2	1	1	1	2	1	0	1	1	9	6	FLINDERS_RANGE_WATTLE
1063018	2	0.20	0.60	0.40	BEDFORD ST	North	16-Oct-07	20	2	2	2	2	1	1	2	2	1	2	1	0	9	9	JARRAH HABITAT TREE
1063018	3	0.60	0.90	0.30	BEDFORD ST	North	16-Oct-07	20	2	2	2	2	1	1	2	2	1	0	0	0	8	7	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063018	4	0.90	1.74	0.84	BEDFORD ST	North	16-Oct-07	20	2	2	1	1	1	1	2	2	1	0	1	1	8	7	FLINDERS_RANGE_WATTLE
1063019	1	0.00	0.31	0.31	COLWYN RD	West	16-Oct-07	20	2	2	2	2	1	1	2	2	2	1	0	0	9	8	TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063019	2	0.31	0.73	0.42	COLWYN RD	West	16-Oct-07	20	2	2	2	2	1	1	2	2	1	1	1	1	9	9	WATSONIA TAGASASTE FLINDERS_RANGE_WATTLE
1063022	1	0.00	0.58	0.58	HORACE ST	East	26-Sep-07	20	2	2	1	1	0	0	1	1	2	1	0	0	6	5	WATSONIA TAGASASTE JARRAH HABITAT TREE
1063023	1	0.00	2.64	2.64	ALICE RD	North	15-Nov-07	20	2	1	1	2	1	1	1	2	1	1	1	1	7	8	FLINDERS_RANGE_WATTLE TAGASASTE WATSONIA
1063023	2	2.64	3.00	0.36	ALICE RD	North	15-Nov-07	20	1	0	1	0	0	0	0	0	0	1	1	1	3	2	FLINDERS_RANGE_WATTLE
1063023	3	3.00	3.74	0.74	ALICE RD	North	15-Nov-07	20	1	2	1	2	1	1	2	2	1	2	1	0	7	9	FLINDERS_RANGE_WATTLE
1063023	4	3.74	4.74	1.00	ALICE RD	North	15-Nov-07	20	1	2	1	2	1	2	2	2	1	2	0	0	6	10	
1063039	1	0.00	0.50	0.50	BUNNING RD	North	16-Oct-07	20	0	1	1	1	0	0	0	0	0	0	0	0	1	2	TAGASASTE WATSONIA
1063039	2	0.50	0.73	0.23	BUNNING RD	North	16-Oct-07	20	2	1	2	1	1	0	1	0	0	0	0	0	6	2	FLINDERS_RANGE_WATTLE WATSONIA

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1063039	3	0.73	1.00	0.27	BUNNING RD	North	16-Oct-07	20	0	1	0	1	0	0	0	0	0	0	1	0	1	2	FLINDERS_RANGE_WATTLE
1063039	4	1.00	1.20	0.20	BUNNING RD	North	16-Oct-07	20	0	2	0	1	0	0	0	1	0	0	1	1	1	5	FLINDERS_RANGE_WATTLE
1063039	5	1.20	1.33	0.13	BUNNING RD	North	16-Oct-07	20	2	0	1	0	0	0	1	0	1	0	1	1	6	1	WATSONIA JARRAH HABITAT TREE
1063039	6	1.33	1.73	0.40	BUNNING RD	North	16-Oct-07	20	2	2	2	1	1	1	2	1	1	0	0	0	8	5	WATSONIA
1063039	7	1.73	2.09	0.36	BUNNING RD	North	16-Oct-07	20	2	2	2	2	1	1	2	2	1	0	0	0	8	7	WATSONIA TAGASASTE
1063039	8	2.09	2.50	0.41	BUNNING RD	North	16-Oct-07	20	2	2	2	2	1	1	1	2	1	2	0	0	7	9	WATSONIA TAGASASTE JARRAH HABITAT TREE
1063039	9	2.50	3.60	1.10	BUNNING RD	North	16-Oct-07	20	1	1	1	1	0	0	0	0	1	1	0	0	3	3	TAGASASTE JARRAH HABITAT TREE
1063039	10	3.60	4.81	1.21	BUNNING RD	North	16-Oct-07	20	2	2	1	1	1	1	1	1	1	0	1	1	7	6	FLINDERS_RANGE_WATTLE TAGASASTE WATSONIA
1063042	1	0.00	0.75	0.75	MILDURA RD	East	16-Oct-07	20	2	2	1	2	1	1	2	2	1	1	0	1	7	9	FLINDERS_RANGE_WATTLE
1063042	2	0.75	1.42	0.67	MILDURA RD	East	16-Oct-07	20	2	2	2	2	1	1	2	2	1	0	0	0	8	7	FLINDERS_RANGE_WATTLE WATSONIA JARRAH HABITAT TREE
1063045	1	0.00	0.26	0.26	KINGSTON RD	West	16-Oct-07	20	2	2	1	1	1	0	1	1	0	0	1	1	6	5	AFRICAN_LOVEGRASS TAGASASTE
1063045	2	0.26	0.86	0.60	KINGSTON RD	North	16-Oct-07	20	2	1	2	0	1	0	2	0	1	0	1	1	9	2	AFRICAN_LOVEGRASS TAGASASTE FLINDERS_RANGE_WATTLE
1063045	3	0.86	1.26	0.40	KINGSTON RD	North	16-Oct-07	20	2	2	1	2	1	1	1	2	1	1	1	1	7	9	WATSONIA FLINDERS_RANGE_WATTLE
1063045	4	1.26	1.51	0.25	KINGSTON RD	North	16-Oct-07	20	2	2	2	2	1	1	2	2	2	1	0	0	9	8	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063049	1	0.00	0.37	0.37	CADE ST	East	16-Oct-07	20	1	1	1	1	0	0	0	0	0	0	1	1	3	3	
1063050	1	0.00	0.55	0.55	BALDOCK ST	South	16-Oct-07	20	2	2	2	2	1	1	2	2	2	2	1	1	10	10	JARRAH HABITAT TREE
1063050	2	0.55	1.21	0.66	BALDOCK ST	South	16-Oct-07	0	2	2	2	2	2	2	2	2	2	0	0	10	10	JARRAH HABITAT TREE	
1063054	1	0.00	0.52	0.52	GRIGG ST	East	16-Oct-07	20	2	2	2	1	1	1	2	1	1	1	0	1	8	7	FLINDERS_RANGE_WATTLE
1063057	1	0.00	0.30	0.30	SAWYERS RD	North	15-Nov-07	0	2	2	1	2	1	2	2	2	0	1	2	2	6	9	
1063057	2	0.30	0.80	0.50	SAWYERS RD	North	15-Nov-07	0	2	2	2	2	2	2	2	2	0	1	0	0	8	9	WATSONIA FLINDERS_RANGE_WATTLE
1063057	3	0.80	1.10	0.30	SAWYERS RD	North	15-Nov-07	0	2	2	2	2	1	1	2	1	0	1	0	1	7	8	FLINDERS_RANGE_WATTLE
1063057	4	1.10	1.30	0.20	SAWYERS RD	North	15-Nov-07	0	2	2	2	1	1	1	2	1	0	1	0	0	7	6	FLINDERS_RANGE_WATTLE
1063057	5	1.30	2.04	0.74	SAWYERS RD	North	15-Nov-07	0	0	2	0	2	0	2	0	2	0	1	1	0	1	9	AFRICAN_LOVEGRASS TAGASASTE WATSONIA FLINDERS_RANGE_WATTLE

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1063057	6	2.04	2.82	0.78	SAWYERS RD	North	15-Nov-07	0	2	2	2	2	2	2	2	2	0	1	0	0	8	9	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE
1063060	1	0.00	0.30	0.30	LANCE ST	East	15-Nov-07	20	2	2	2	2	2	2	2	2	1	1	0	0	9	9	WATSONIA FLINDERS_RANGE_WATTLE
1063062	1	0.00	0.40	0.40	HUMMERSTON ST	North East	15-Nov-07	20	2	2	2	1	1	1	2	1	1	1	0	0	8	6	TAGASASTE FLINDERS_RANGE_WATTLE WATSONIA BRIDAL_CREEPER AFRICAN_LOVEGRASS
1063062	2	0.40	0.80	0.40	HUMMERSTON ST	North East	15-Nov-07	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	TAGASASTE FLINDERS_RANGE_WATTLE WATSONIA BRIDAL_CREEPER AFRICAN_LOVEGRASS
1063062	3	0.80	1.33	0.53	HUMMERSTON ST	North East	15-Nov-07	20	2	1	2	1	2	0	2	1	1	1	1	1	10	5	TAGASASTE FLINDERS_RANGE_WATTLE
1063065	1	0.00	0.32	0.32	BERNARD ST	South West	15-Nov-07	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	FLINDERS_RANGE_WATTLE
1063065	2	0.32	0.86	0.54	BERNARD ST	South West	15-Nov-07	20	1	1	1	1	1	1	1	1	0	0	1	1	5	5	TAGASASTE WATSONIA
1063065	3	0.86	1.40	0.54	BERNARD ST	South West	15-Nov-07	20	1	1	0	1	0	0	0	0	0	0	1	1	2	3	FLINDERS_RANGE_WATTLE WATSONIA AFRICAN_LOVEGRASS
1063065	4	1.40	1.80	0.40	BERNARD ST	North West	15-Nov-07	20	1	2	1	2	0	1	0	2	0	0	1	0	3	7	FLINDERS_RANGE_WATTLE WATSONIA
1063066	1	0.00	0.77	0.77	LION ST	North	16-Oct-07	20	1	1	1	1	0	0	0	1	1	0	1	1	4	4	AFRICAN_LOVEGRASS WATSONIA TAGASASTE
1063066	2	0.77	1.08	0.31	LION ST	North	16-Oct-07	20	1	2	1	1	0	0	1	1	0	0	1	0	4	4	AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE
1063066	3	1.08	2.22	1.14	LION ST	North	16-Oct-07	20	1	1	1	1	0	0	0	0	0	0	1	1	3	3	FLINDERS_RANGE_WATTLE WATSONIA
1063068	1	0.00	0.30	0.30	WILKINS RD	South	15-Nov-07	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	TAGASASTE FLINDERS_RANGE_WATTLE
1063068	2	0.30	0.60	0.30	WILKINS RD	South	15-Nov-07	20	2	2	2	2	2	2	2	2	2	1	1	1	11	10	TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063068	3	0.60	0.85	0.25	WILKINS RD	South	15-Nov-07	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	BRIDAL_CREEPER JARRAH HABITAT TREE

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1063069	1	0.00	0.20	0.20	ELLIOTT RD	East	15-Nov-07	0	2	1	2	0	2	0	2	1	1	0	1	0	10	2	FLINDERS_RANGE_WATTLE WATSONIA AFRICAN_LOVEGRASS
1063069	2	0.20	0.50	0.30	ELLIOTT RD	East	15-Nov-07	0	2	0	2	0	2	0	1	0	1	0	1	1	9	1	FLINDERS_RANGE_WATTLE WATSONIA
1063069	3	0.50	0.84	0.34	ELLIOTT RD	East	15-Nov-07	0	2	2	2	2	2	1	2	2	1	1	0	1	9	9	FLINDERS_RANGE_WATTLE WATSONIA
1063069	4	0.84	1.70	0.86	ELLIOTT RD	East	15-Nov-07	0	1	1	1	0	0	0	0	0	0	0	0	1	2	2	WATSONIA AFRICAN_LOVEGRASS TAGASASTE FLINDERS_RANGE_WATTLE
1063069	5	1.70	2.70	1.00	ELLIOTT RD	East	15-Nov-07	0	2	2	2	2	2	2	2	2	1	2	0	0	9	10	WATSONIA AFRICAN_LOVEGRASS FLINDERS_RANGE_WATTLE
1063069	6	2.70	4.00	1.30	ELLIOTT RD	East	15-Nov-07	0	2	2	2	1	2	1	2	1	1	1	1	1	10	7	WATSONIA AFRICAN_LOVEGRASS TAGASASTE FLINDERS_RANGE_WATTLE
1063081	1	0.00	1.10	1.10	SIME RD	South	15-Nov-07	20	2	2	2	2	2	2	2	2	1	0	0	10	9	JARRAH HABITAT TREE	
1063081	2	1.10	1.37	0.27	SIME RD	South	15-Nov-07	20	2	1	2	1	2	1	2	2	1	0	0	1	9	6	
1063082	1	0.00	0.30	0.30	MATHIESON RD	South	15-Nov-07	20	0	2	0	2	0	2	0	2	0	1	2	1	2	10	FLINDERS_RANGE_WATTLE TAGASASTE
1063082	2	0.30	0.74	0.44	MATHIESON RD	South	15-Nov-07	20	0	2	0	2	0	2	1	2	2	1	1	0	4	9	FLINDERS_RANGE_WATTLE
1063087	1	0.00	0.87	0.87	CLIFTON ST	West	12-Oct-07	20	0	1	0	0	0	0	0	0	0	0	0	0	0	1	AFRICAN_LOVEGRASS WATSONIA
1063091	1	0.00	9.42	9.42	OLD NORTHAM RD	South West	12-Oct-07	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	TAGASASTE WATSONIA AFRICAN_LOVEGRASS BRIDAL_CREEPER FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063093	1	0.00	0.30	0.30	NORTHCOTE ST	East	12-Oct-07	20	2	2	0	0	1	1	2	2	1	1	2	2	6	6	
1063095	1	0.00	1.13	1.13	ASH RD	East	10-Oct-07	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	TAGASASTE
1063095	2	1.13	2.01	0.88	ASH RD	East	10-Oct-07	20	2	1	1	1	1	1	1	1	1	2	0	1	6	7	TAGASASTE AFRICAN_LOVEGRASS JARRAH HABITAT TREE

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
1063095	3	2.01	5.80	3.79	ASH RD	East	10-Oct-07	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	FLINDERS_RANGE_WATTLE TAGASASTE AFRICAN_LOVEGRASS JARRAH HABITAT TREE
1063096	1	0.00	0.47	0.47	BETTY ST	North	12-Oct-07	20	2	2	1	1	1	2	2	2	1	2	0	0	7	9	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063099	1	0.00	0.90	0.90	LIBERTON RD	North	20-Sep-07	20	1	1	0	1	0	1	0	2	1	1	2	2	4	8	WATSONIA FLINDERS_RANGE_WATTLE
1063099	2	0.90	1.40	0.50	LIBERTON RD	North	20-Sep-07	20	2	2	1	2	2	2	2	2	1	2	2	0	10	10	WATSONIA FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063099	3	1.40	2.80	1.40	LIBERTON RD	North	20-Sep-07	20	2	2	2	2	2	2	2	2	2	2	2	0	12	10	JARRAH HABITAT TREE
1063099	4	2.80	4.10	1.30	LIBERTON RD	North	20-Sep-07	20	2	2	2	2	2	2	2	2	2	2	1	0	11	10	JARRAH HABITAT TREE
1063099	5	4.10	5.70	1.60	LIBERTON RD	North	20-Sep-07	20	2	2	1	1	2	2	2	2	2	2	0	1	9	10	JARRAH HABITAT TREE
1063099	6	5.70	6.44	0.74	LIBERTON RD	North	20-Sep-07	20	2	2	1	1	1	1	2	2	1	2	1	1	8	9	TAGASASTE BRIDAL_CREEPER JARRAH HABITAT TREE
1063100	1	0.40	1.31	0.91	LILYDALE RD	North	12-Oct-07	20	1	2	0	1	0	1	1	2	0	2	0	0	2	8	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS JARRAH HABITAT TREE
1063100	2	1.31	3.98	2.67	LILYDALE RD	North	12-Oct-07	20	2	2	1	1	1	1	1	1	2	2	0	1	7	8	TAGASASTE JARRAH HABITAT TREE
1063102	1	0.00	2.68	2.68	TARRUP ST	North	12-Oct-07	20	2	2	0	0	1	0	1	1	1	1	1	1	6	5	WATSONIA AFRICAN_LOVEGRASS
1063103	1	0.00	0.65	0.65	BALLOT RD	East	12-Oct-07	20	2	2	1	1	2	2	2	2	2	2	0	0	9	9	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063104	1	0.00	0.90	0.90	JORDAN RD	East	12-Oct-07	20	2	2	1	1	1	0	2	2	2	1	0	0	8	6	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063105	1	0.00	0.53	0.53	LEITH ST	South	12-Oct-07	20	2	2	1	1	2	2	2	2	2	2	1	0	9	9	FLINDERS_RANGE_WATTLE TAGASASTE JARRAH HABITAT TREE
1063106	1	0.00	0.75	0.75	CLEAVER ST	West	12-Oct-07	20	2	1	1	0	1	0	2	2	2	1	0	1	8	5	JARRAH HABITAT TREE
1063107	1	0.00	1.36	1.36	FORGE DR	North	10-Oct-07	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	JARRAH HABITAT TREE
1063107	2	1.36	2.36	1.00	FORGE DR	North	10-Oct-07	20	1	1	0	0	0	0	0	0	0	1	0	0	1	2	JARRAH HABITAT TREE
1063108	1	0.00	2.09	2.09	COOTHALLIE RD	East	10-Oct-07	20	2	2	1	1	1	1	2	2	1	2	1	0	8	8	TAGASASTE JARRAH HABITAT TREE
1063109	1	0.00	0.28	0.28	TEAR ST	North	12-Oct-07	20	2	2	1	1	1	1	2	1	2	1	0	0	8	6	TAGASASTE JARRAH HABITAT TREE

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
1063110	1	0.00	0.40	0.40	PROGRESS DR	North	12-Oct-07	20	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	TAGASASTE AFRICAN_LOVEGRASS
1063110	2	0.40	1.20	0.80	PROGRESS DR	North	12-Oct-07	20	2	2	1	1	0	0	2	2	1	1	0	0	6	6	TAGASASTE AFRICAN_LOVEGRASS	
1063111	1	0.00	0.70	0.70	LOCKWOOD RD	South	10-Oct-07	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	FLINDERS_RANGE_WATTLE TAGASASTE BRIDAL_CREEPER	
1063112	1	0.00	0.50	0.50	SIMMONS ST	North west	10-Oct-07	20	2	2	1	1	1	1	1	1	1	2	2	2	8	9	AFRICAN_LOVEGRASS JARRAH HABITAT TREE	
1063113	1	0.00	0.53	0.53	ILBERY ST	South	10-Oct-07	20	2	1	0	0	1	1	1	1	1	1	0	0	5	4	FLINDERS_RANGE_WATTLE	
1063114	1	0.00	0.70	0.70	DOCONING RD	North	10-Oct-07	20	2	2	1	1	1	1	2	2	2	2	1	0	9	8	FLINDERS_RANGE_WATTLE AFRICAN_LOVEGRASS TAGASASTE FLAXLEAF_BROOM JARRAH HABITAT TREE	
1063114	2	0.70	2.70	2.00	DOCONING RD	North	10-Oct-07	20	2	2	1	1	2	2	0	2	2	2	0	0	7	9		
1063115	1	0.00	0.88	0.88	CABLE ST	East	10-Oct-07	20	2	2	1	1	1	1	2	2	2	2	2	0	10	8	TAGASASTE JARRAH HABITAT TREE	
1063117	1	0.00	2.42	2.42	WARRIGAL WY	East	10-Oct-07	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	TAGASASTE JARRAH HABITAT TREE	
1063118	1	0.00	1.78	1.78	NEEDHAM RD	West	20-Sep-07	20	2	2	1	1	1	1	2	2	2	1	0	0	8	7	FLINDERS_RANGE_WATTLE TAGASASTE	
1063118	2	1.78	3.40	1.62	NEEDHAM RD	West	20-Sep-07	20	1	2	0	0	1	1	1	1	1	0	0	4	5	FLINDERS_RANGE_WATTLE		
1063118	3	3.40	4.03	0.63	NEEDHAM RD	West	20-Sep-07	20	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	
1063120	1	0.00	0.66	0.66	JASON ST	West	23-Sep-07	20	2	1	2	1	2	0	2	2	2	1	0	1	10	6	JARRAH HABITAT TREE	
1063121	1	0.00	0.34	0.34	GREEN ST	East	23-Sep-07	20	2	2	0	0	0	0	0	0	1	1	0	0	3	3	WATSONIA TAGASASTE FLINDERS_RANGE_WATTLE BRIDAL_CREEPER	
1063121	2	0.34	1.49	1.15	GREEN ST	South	23-Sep-07	20	2	2	2	2	2	2	2	2	2	0	0	10	10	TAGASASTE JARRAH HABITAT TREE		
1063129	1	0.00	1.15	1.15	DINSDALE RD	North	20-Sep-07	20	1	2	1	1	1	1	2	2	1	2	2	2	7	9	JARRAH HABITAT TREE	
1063130	1	0.45	1.05	0.60	BAILUP RD	North	23-Sep-07	20	2	2	1	1	1	1	2	2	1	1	1	0	8	7	WATSONIA TAGASASTE BRIDAL_CREEPER FLINDERS_RANGE_WATTLE	

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)	
									Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right		Left
1063130	2	1.05	3.65	2.60	BAILUP RD	North	23-Sep-07	20	2	2	1	1	1	1	1	1	2	0	1	1	8	6	TAGASASTE AFRICAN_LOVEGRASS BRIDAL_CREEPER FLAXLEAF_BROOM FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1063132	1	0.00	2.17	2.17	LINLEY VALLEY RD	East	20-Sep-07	20	2	2	1	1	2	2	2	2	2	1	1	2	10	10	AFRICAN_LOVEGRASS BRIDAL_CREEPER TAGASASTE FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1063132	2	2.17	3.15	0.98	LINLEY VALLEY RD	East	20-Sep-07	20	0	2	0	0	0	1	1	1	0	1	0	1	1	6	6	AFRICAN_LOVEGRASS TAGASASTE JARRAH HABITAT TREE
1063133	1	0.00	4.45	4.45	WERRIBEE RD	South	20-Sep-07	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	WATSONIA AFRICAN_LOVEGRASS TAGASASTE JARRAH HABITAT TREE	
1063134	1	0.00	1.98	1.98	HARPER RD	South East	20-Sep-07	20	2	2	0	0	0	0	1	1	2	2	1	1	6	6	AFRICAN_LOVEGRASS WATSONIA TAGASASTE BRIDAL_CREEPER JARRAH HABITAT TREE	
1063135	1	0.00	2.00	2.00	RAHNIE RD	North West	23-Sep-07	20	2	2	1	1	1	1	1	1	1	1	1	1	7	7	BRIDAL_CREEPER WATSONIA JARRAH HABITAT TREE	
1063136	1	0.00	2.16	2.16	ALLEN ST	North	20-Sep-07	20	2	2	1	1	1	1	2	2	2	1	1	2	9	9	WATSONIA FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1063137	1	0.00	1.08	1.08	STANWIX PLACE	East	20-Sep-07	20	2	2	1	1	1	1	2	2	1	1	1	1	8	8	FLINDERS_RANGE_WATTLE TAGASASTE AFRICAN_LOVEGRASS JARRAH HABITAT TREE	
1063138	1	0.00	1.02	1.02	WEDGE ST	East	20-Sep-07	20	2	2	1	1	1	1	2	2	1	2	2	0	9	8	TAGASASTE JARRAH HABITAT TREE	
1063140	1	0.00	0.17	0.17	BANKS AVE	West	12-Oct-07	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	JARRAH HABITAT TREE	
1063141	1	0.00	0.60	0.60	CARTER RD	East	10-Oct-07	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9		
1063141	2	0.60	1.10	0.50	CARTER RD	East	10-Oct-07	20	2	2	1	1	1	1	2	2	1	2	2	0	9	8	JARRAH HABITAT TREE	
1063149	1	0.00	0.27	0.27	ANVIL WY	East	10-Oct-07	20	1	1	0	0	0	0	0	0	0	1	0	1	1	3		

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1063152	1	0.00	0.70	0.70	DOUGLAS RD	North West	15-Nov-07	20	0	0	0	0	0	0	0	0	0	2	2	2	2	AFRICAN_LOVEGRASS	
1063153	1	0.00	0.40	0.40	HORSESHOE LN	South East	10-Oct-07	20	2	2	1	1	1	1	1	1	2	0	0	6	7	FLINDERS_RANGE_WATTLE TAGASASTE JARRAH HABITAT TREE	
1063154	1	0.00	0.60	0.60	PATTERSON RD	East	10-Oct-07	20	2	2	2	2	1	1	2	2	1	2	2	0	10	9	JARRAH HABITAT TREE
1063155	1	0.00	0.37	0.37	THORNWICK CR	East	12-Oct-07	20	2	2	2	2	2	2	2	2	2	0	0	10	10	TAGASASTE WATSONIA JARRAH HABITAT TREE	
1063156	1	0.00	0.60	0.60	HORTON RD	North East	12-Oct-07	20	2	2	1	1	2	2	2	2	2	0	0	9	9		
1063156	2	0.60	1.50	0.90	HORTON RD	North East	12-Oct-07	20	2	2	1	1	2	2	2	2	2	2	0	11	9	JARRAH HABITAT TREE	
1063156	3	1.50	2.10	0.60	HORTON RD	North East	12-Oct-07	20	2	0	1	0	2	0	2	0	2	1	0	9	1		
1063161	1	0.00	0.30	0.30	BAMBROOK RD	South	15-Nov-07	20	2	2	2	2	2	2	2	2	2	1	0	11	10	JARRAH HABITAT TREE	
1063161	2	0.30	0.50	0.20	BAMBROOK RD	South	16-Nov-07	20	2	2	2	2	2	2	2	2	1	0	0	10	9	JARRAH HABITAT TREE	
1063161	3	0.50	0.82	0.32	BAMBROOK RD	South	17-Nov-07	20	2	2	2	2	2	2	2	2	1	1	1	11	10	JARRAH HABITAT TREE	
1063162	1	0.00	2.00	2.00	BRINKIE WAY	West	17-Sep-07	20	2	2	1	1	1	2	2	2	2	0	0	8	9	JARRAH HABITAT TREE	
1063164	1	0.00	0.55	0.55	BRAIDWOOD DRIVE	East	20-Sep-07	20	1	0	0	0	0	0	0	0	0	1	1	1	2	2	JARRAH HABITAT TREE
1063170	1	0.00	0.75	0.75	HOPEDALE RISE	East	20-Sep-07	20	0	0	0	0	0	0	0	0	0	2	2	2	2		
1063171	1	0.00	0.21	0.21	SLAYTER PLACE	West	20-Sep-07	20	2	2	1	1	1	1	2	2	2	2	0	10	8	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE	
1063183	1	0.00	0.23	0.23	PLATEAU HTS	South	12-Sep-07	20	2	2	1	0	2	0	2	2	2	1	1	1	10	6	
1063196	1	0.00	0.45	0.45	SUNDOWNER GROVE	North	24-Oct-07	20	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
1063237	1	0.00	1.12	1.12	HAIGH RD	South	10-Oct-07	20	1	1	0	0	0	0	0	0	0	1	0	0	1	2	FLINDERS_RANGE_WATTLE JARRAH HABITAT TREE
1063238	1	0.00	0.30	0.30	FORSYTH PL	East	10-Oct-07	20	1	1	0	0	0	0	0	0	0	1	0	0	1	2	FLINDERS_RANGE_WATTLE
1063250	1	0.00	2.36	2.36	MCDOWELL LOOP	West	17-Oct-07	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1063257	1	0.00	0.38	0.38	MURAUBA PL	East	20-Sep-07	20	2	0	0	0	0	0	0	0	1	0	2	2	5	2	FLINDERS_RANGE_WATTLE
1063272	1	0.00	0.43	0.43	TOMALLAN CLOSE	North	17-Oct-07	20	0	0	0	0	0	0	0	0	0	2	2	2	2		

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegetation		Extent of Native Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data (Listed if Present)
									(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
1063275	1	0.00	1.49	1.49	WERRIBEE RD (SERVICE RD)	East	20-Sep-07	20	2	2	1	1	1	1	2	2	1	1	1	1	8	8	TAGASASTE BRIDAL_CREEPER WATSONIA JARRAH HABITAT TREE
1063283	1	0.00	0.60	0.60	WOODLANDS RD	West	15-Nov-07	20	2	2	2	1	1	2	2	1	1	1	1	9	8		
1063283	2	0.60	1.50	0.90	WOODLANDS RD	North	15-Nov-07	20	0	0	0	0	0	0	2	2	2	1	0	1	4	4	
1063283	3	1.50	2.16	0.66	WOODLANDS RD	North	15-Nov-07	20	0	0	0	0	0	0	0	0	0	0	2	1	2	1	
1063284	1	0.00	0.62	0.62	WILDBERRY DR	East	15-Nov-07	20	0	0	0	0	0	0	2	1	1	1	1	1	4	3	
1063284	2	0.62	0.98	0.36	WILDBERRY DR	East	15-Nov-07	20	0	0	0	0	0	0	2	2	1	2	2	2	5	6	
1063284	3	0.98	1.20	0.22	WILDBERRY DR	East	15-Nov-07	20	0	0	0	1	0	1	2	2	1	1	1	0	4	5	
1063285	1	0.00	0.47	0.47	CLUTTERBUCK CLOSE	East	15-Nov-07	20	0	0	0	0	0	0	1	1	2	1	1	1	4	3	JARRAH HABITAT TREE
1063288	1	0.00	0.42	0.42	TIMBERTOP WAY (EAST)	West	15-Nov-07	20	0	0	0	0	0	0	2	2	0	0	1	1	3	3	AFRICAN_LOVEGRASS
1063289	1	0.00	0.66	0.66	SILIA RETREAT	South	15-Nov-07	20	0	0	0	0	0	0	0	0	1	1	1	1	2	2	
1063290	1	0.00	0.25	0.25	KANANGRA COURT	South	15-Nov-07	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	

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 Native 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

3

APPENDIX 3

Road names and lengths: Shire of Mundaring

(Source: Main Roads WA 18/06/2007)

Road number	Road name	Road length (km)
1060056	ABBOTT WY	0.41
1063144	ABERCORN RD	5.12
1060062	ABINGDON RD	0.59
1060063	ACKMAR WY	0.37
1062543	ADAIR RD	0.19
1061042	ADELAIDE CR	0.13
1063262	ADLER HEIGHTS	0.15
1060140	ALANDALE RD	0.32
1060144	ALBERT ST	0.05
1062012	ALEXANDRA RD	0.86
1063023	ALICE RD	4.74
1063186	ALIDJA LANE	0.26
1063053	ALISON ST	1.54
1062570	ALLAMBIE COURT	0.15
1061092	ALLEN PL	0.12
1063136	ALLEN ST	2.16
1061081	ALLESTREE DR	0.41
1062039	ALLMAN RD	0.46
1061164	ALLPIKE RD	1.09
1063058	ALPS ST	0.65
1061074	AMHERST AVE	0.31
1060123	AMHERST RD	0.99
1063195	ANCHOR COVE	0.05
1063008	ANKETELL RD	2.26
1063177	ANN ST	0.10
1062008	ANNE RD	0.32
1062132	ANTHONY PL	0.39
1063149	ANVIL WY	0.27
1061052	APPROACH RD	0.54
1060012	ARTELLO BAY RD	0.46
1060134	ARUNDLE AVE	0.39
1063095	ASH RD	5.80
1062127	ASHSTEAD ST	0.21
1063249	ASPEN PL	0.06
1062550	ATKINS RD	1.97
1063180	ATOIFI GARDENS	0.20
1062513	AUDREY ST	0.11
1063160	AUSTIN CLOSE	0.25
1062082	AYRES RD	0.85
1061121	AZEEZA CT	0.12
1063270	BAGGINS END	0.23
1061193	BAILEY RD	1.61
1063130	BAILUP RD	10.37
1063050	BALDOCK ST	1.21
1060024	BALFOUR RD	0.96
1062542	BALL RD	0.28
1063103	BALLOT RD	0.65
1060153	BALMAIN RD	0.54
1063161	BAMBROOK ST	0.82
1063256	BANDENE GROVE	0.20
1063140	BANKS AVE	0.17
1063004	BANKSIA GR	0.23
1060045	BANNER PL	0.10

1061180	BARHAM RD	0.40
1063005	BARKALA WY	1.07
1062528	BARLEE ST	0.19
1062129	BARLOW ST	0.26
1062509	BARRETT RD	0.78
1060142	BARUSSELA AVE	0.21
1062041	BATTERY RD	0.20
1062021	BEACON RD	2.39
1060005	BEACONSFIELD AVE	0.97
1060114	BEDALE ST	0.17
1063018	BEDFORD ST	1.74
1061059	BEENONG RD	0.60
1063179	BEGA ST	0.16
1061187	BENOWA DR	0.53
1062005	BENTLEY PL	0.30
1062088	BENTLEY ST	1.00
1060120	BERESFORD GDNS	0.64
1063065	BERNARD ST	1.80
1061158	BERRIMA CT	0.09
1061118	BERTRAM ST	0.54
1063096	BETTY ST	1.11
1063168	BETULA CRT	0.16
1060122	BEXLEY CL	0.04
1061126	BILGOMAN RD	1.62
1061117	BINBROOK PL	0.16
1062122	BINDER ST	0.19
1062582	BIRCH PL	0.18
1060162	BLACKBOY RD	0.17
1060067	BLADON WY	0.49
1063070	BLAIR PL	0.16
1060059	BLANCHARD RD	1.04
1060068	BLLENHEIM PL	0.26
1060176	BLUE GUM PL	0.30
1063003	BLUE WREN PL	0.29
1063230	BOHEMIA CRT	0.15
1060100	BONA VISTA RD	0.18
1060106	BOORABILLA WY	0.32
1061012	BOOTH PL	0.08
1062565	BOWEN PLACE	0.23
1061051	BOYA CT	0.51
1062150	BOYAMYNE RD	1.59
1063164	BRAIDWOOD DRIVE	0.55
1061150	BRAXAN ST	0.30
1063209	BRECKLER DRIVE	0.33
1060052	BRETTON CT	0.10
1062051	BRINDLE RD	0.47
1063162	BRINKIE WAY	2.00
1062573	BRONZEWING PLACE	0.07
1061073	BROOK RD	0.53
1062017	BROOKING RD	3.10
1062030	BROOKSIDE LA	0.56
1061200	BRORA GR	0.19
1060115	BROWNFIELD DR	0.37
1060035	BUCKINGHAM RD	1.09
1063254	BUCKLAND GR	0.22
1060172	BUCKNELL PL	0.25
1063277	BUD CRT	0.10
1061198	BULKIRRA PLACE	0.11
1060143	BULLARRA RD	0.42
1060023	BUNINYONG RD	0.54

1063039	BUNNING RD	4.81
1063157	BURKE ST	0.20
1061141	BURKINSHAW RD	0.45
1063139	BURMA RD	2.74
1062547	BURRA RD	0.15
1060104	BURTON PL	0.06
1061107	BURTON RD	0.57
1062577	BUSHLANDS RD	1.20
1062032	BYFIELD RD	0.72
1063115	CABLE ST	0.94
1063049	CADE ST	0.37
1062559	CAIRN ST	0.20
1061108	CAIRNHILL CT	0.30
1062006	CALLAN ST	0.95
1063218	CALLISTEMON CLOSE	0.16
1062085	CAMERON RD	2.99
1061109	CAMFIELD RD	0.61
1062575	CAMPBELL WAY	0.45
1063217	CAMPHORA MEWS	0.19
1060141	CARA RD	0.42
1062027	CARAWATHA RD	0.57
1060064	CARLTON PL	0.33
1063267	CARMICHEAL CRT	0.18
1062099	CARSON ST	0.56
1061119	CARSTAIRS RD	0.21
1063141	CARTER RD	2.32
1061190	CASINO RD (EAST)	0.32
1061087	CASINO RD (WEST)	0.20
1061144	CECIL ST	0.47
1060057	CHALFRONT WY	0.41
1060054	CHANDOS PL	0.11
1062518	CHARLES RD	1.02
1060070	CHARTWELL WY	0.53
1063240	CHAUNCY PL	0.14
1060170	CHENEY CT	0.20
1063071	CHIDLOW ST	0.97
1062072	CHIPPER ST	0.18
1060148	CHIRAZ ST	0.34
1061199	CHITTAWARA COURT	0.25
1060061	CHRISTOWE WY	0.51
1060069	CHURCHILL DR	0.56
1062009	CLARE RD	0.42
1063198	CLARET ASH CRT	0.13
1063127	CLAYDEN ST	0.35
1061031	CLAYTON RD	2.99
1061015	CLAYTON ST	0.45
1063106	CLEAVER ST	0.75
1063258	CLEMATIS GROVE	0.36
1062045	CLIFTON RD	0.81
1063087	CLIFTON ST	1.65
1063201	CLIPSON CRS	0.56
1063285	CLUTTERBUCK CLOSE	0.47
1062572	COCKATOO DR	0.94
1062558	COLE RD	2.72
1063019	COLWYN RD	0.73
1062590	CONRADI PL	0.20
1061168	CONSTANCE ST	0.60
1061173	COOK ST	0.57
1063038	COOK ST	2.25
1063268	COOKES PL	0.28

1063176	COOLANGATTA RD	0.23
1062525	COOLGARDIE ST	2.69
1060149	COONGAN AVE	0.79
1063108	COOTHALLIE RD	3.16
1062048	COPPIN L	0.30
1062047	COPPIN RD	2.64
1062519	COPPIN RD	0.16
1060181	COTTINGLEY PLACE	0.08
1061008	COULSTON RD	3.50
1062529	COUNCIL RD	0.40
1062100	COUSINS PL	0.09
1062534	CRAIG ST	0.42
1062595	CRAIGIE PLACE	0.14
1062523	CRAVEN RD	0.54
1062563	CROMWELL RD	0.62
1060145	CROYDON ST	0.06
1060171	CUPELLO DR	0.56
1060087	CURVE RD	0.22
1060010	DAGENHAM CR	0.16
1060065	DAGMAR WY	0.37
1060053	DAINE CT	0.10
1062016	DALBY RD	0.32
1061171	DALE PL	0.13
1061138	DALEVIEW CL	0.29
1061085	DALRY RD	1.42
1060055	DALWOOD RD	0.44
1060157	DAMASCAS DRIVE	0.69
1063033	DARGIN ST	0.51
1062544	DARKAN ST	3.12
1061072	DARLINGTON RD	2.71
1062557	DARROWBY PL	0.23
1062036	DARTNALL RD	1.28
1061024	DAVIS RD	0.30
1060014	DAYANA CLOSE	0.08
1063063	DEAN ST	0.50
1062091	DENHOLME PL	0.10
1063169	DESERT ASH PLACE	0.26
1061124	DEVLIN ST	0.09
1062023	DEVON PL	0.35
1063031	DIBBLE ST	0.65
1063129	DINSDALE RD	3.53
1063114	DOCONING RD	2.70
1062574	DODINGTON PLACE	0.26
1060154	DOMAIN COURT	0.10
1063152	DOUGLAS RD	0.70
1062571	DOVE COURT	0.13
1062555	DOWELL ST	0.06
1063061	DOWIE ST	0.25
1062512	DRAPER RD	0.35
1061079	DREGHORN RD	0.52
1061106	DRYANDRA CR	0.82
1063231	DUFFIELD RD	0.20
1062578	DUNCAN PLACE	0.25
1063232	DUNHAM GLEN	0.48
1062028	DURA RD	0.18
1061089	DUVAL RD	0.12
1061123	DUVAL RD	0.13
1062107	EAGLE ST	0.75
1060166	EAGLEMONT DR	0.27
1063025	EALY ST	0.60

1062116	EASON RD	0.77
1063055	EASTLEIGH PL	0.36
1061045	EASTON CT	0.13
1063182	ECHIDNA COURT	0.02
1061172	EDITH ST	0.28
1063036	EGAN RD	0.14
1061014	ELDER WAY	0.50
1060112	ELDWICK LP	0.18
1062527	ELIZABETH AVE	1.34
1060051	ELLESMERE RD	0.44
1060019	ELLIOT ST	0.40
1063069	ELLIOTT RD	4.05
1063197	ELM PL	0.06
1063035	ELMORE ST	0.72
1060015	ELMSFIELD RD	0.66
1062102	EMMERSON ST	0.25
1060175	ENSIGN DR	0.28
1062567	ERICA COURT	0.09
1063193	ERIN DALE	0.06
1062152	ESTELLE PCE	0.50
1063037	EVANS ST	1.10
1062561	FAGAN ST	1.68
1060058	FAIRFAX RD	0.51
1062018	FALLS RD	2.01
1061011	FARMVIEW DR	0.51
1060016	FARRALL RD	1.05
1062043	FELDMAN CR	0.67
1062103	FENNELL CT	0.08
1062536	FENTON ST	0.28
1061114	FERGUSON RD	0.48
1061130	FERGUSON RD	0.29
1062589	FERNHILL PL	0.23
1060026	FERRIER ST	0.23
1061091	FISCHER RD	0.40
1060164	FLANDERS CT	0.18
1060156	FLEUR RD	0.07
1061191	FLINT RD	0.14
1062003	FLORA RD	0.51
1063142	FLYNN RD	7.19
1060119	FORDHAM DR	0.58
1063107	FORGE DR	2.36
1062526	FORREST AVE	1.02
1060088	FORREST RD	0.30
1062114	FORREST ST	1.13
1063238	FORSYTH PL	0.23
1060136	FRASER DR	0.23
1061022	FREDERIC ST	0.84
1061043	FREDERIC ST	0.11
1063052	FRITH ST	0.73
1061053	FYFE ST	0.52
1060132	GABO RD	0.34
1060185	GALLANT CT	0.10
1060160	GALLIPOLI DR	0.74
1063227	GAMGEE GROVE	0.13
1063206	GANNON GLEN	0.21
1063216	GARDENIA GDNS	0.20
1060159	GAZA COURT	0.10
1062068	GEARY ST	0.21
1063064	GEORGE ST	0.22
1062101	GILFELLON RD	0.54

1062055	GILL LA	0.35
1062053	GILL ST	2.21
1061120	GIRVAN PL	0.12
1060179	GLADSTONE AVE	1.20
1061162	GLADYS ST	0.42
1061076	GLEBE RD	0.50
1061155	GLEN FORREST DR	1.93
1061056	GLEN RD	1.84
1061160	GLENBURN RD	0.39
1062038	GLENDOWER ST	0.39
1061027	GLENLEA DR	0.60
1062588	GLENROY CT	0.17
1061034	GLENVIEW PL	0.07
1061028	GLENWAY	0.25
1061032	GLENWOOD AVE	0.83
1061132	GLENWOOD AVE	0.29
1061033	GLENWOOD PL	0.06
1062019	GLIDDON RD	0.32
1063260	GLYN PL	0.17
1061026	GLYNDEN WAY	0.65
1063225	GODDARD PLACE	0.14
1063241	GODLEY CLOSE	0.01
1063220	GOLDEN ASH GARDENS	0.25
1063292	GOLDEN ASH GARDENS EAST	0.14
1061010	GOODCHILD PL	0.06
1063173	GOODWIN PLACE	0.45
1061186	GOORAY ST	0.23
1065005	GORRY RD	12.50
1062117	GOSLIN ST	0.74
1061133	GOSTELOW RD	0.15
1063119	GOVERNMENT RD	3.91
1063172	GRAHAM ST NORTH	0.32
1063076	GRAHAME ST SOUTH	0.27
1062054	GRANCEY AVE	0.35
1062050	GRANITE RD	1.09
1062593	GRAY CT	0.10
1063121	GREEN ST	1.50
1063192	GREEN VALLEY CRT	0.20
1063266	GREENMOUNT RISE	0.13
1063293	GREENMOUNT RISE EAST	0.16
1062090	GRENVILLE RD	0.63
1060108	GREVILLEA CR	0.30
1063054	GRIGG ST	0.52
1062548	GUGERI ST	0.12
1063251	GUM GLADE	0.13
1063175	GUMTREE CLOSE	0.09
1060107	GUNGURRU CT	0.24
1063237	HAIGH RD	1.12
1062549	HALIFAX PL	0.41
1062552	HALL RD	0.24
1062124	HALLET RD	0.31
1060135	HAMILTON TCE	0.28
1062086	HANLEY ST	0.56
1061094	HANZELL RD	0.38
1062073	HAPPINESS LANE	0.18
1061021	HARCOURT PL	0.27
1061153	HARDEY RD	3.23
1061142	HAROLD ST	0.17
1061175	HAROLD ST	0.15
1063134	HARPER RD	1.98

1063246	HARTUNG LANE WEST	0.18
1062077	HARTUNG LN	0.24
1062060	HARTUNG ST	1.22
1061146	HARVEL CL	0.05
1062087	HAWDON ST	0.38
1062089	HAWKE ST	0.12
1061131	HAWTER RD	0.44
1063048	HAYDEN ST	0.12
1063191	HEBB CRT	0.33
1062010	HEDGES RD	2.00
1063034	HEFRON ST	0.34
1062071	HELENA ST	0.42
1062126	HELENA TCE	1.19
1061039	HELENA VALLEY RD	6.12
1062093	HENDERSON RD	0.16
1063265	HERBERT ST	0.10
1063146	HERON CL	0.59
1060125	HESKETH RD	0.19
1063236	HIDDEN CRT	0.22
1062156	HIDDEN VALLEY RD	2.47
1062157	HIGGINSON RD	0.37
1060102	HIGH VIEW RD	0.33
1062024	HILL RD	0.92
1061169	HILLCREST DR	0.32
1062065	HILLCREST RD	0.37
1061086	HILLSDEN RD	0.89
1062580	HILLTOP RD	0.29
1060091	HILLWAY	0.26
1063122	HINKLER RD	1.04
1063235	HOBBIT GLADE	0.12
1062535	HODGSON ST	0.29
1061178	HOLBROOK RD	0.64
1062083	HOLLETT RD	1.24
1061070	HOLMESDALE PL	0.22
1061184	HOLPIN PL	0.14
1062517	HOMESTEAD RD	0.71
1063074	HONEY ST	0.58
1063234	HONEYEATER GLADE	0.25
1063170	HOPEDALE RISE	0.75
1063022	HORACE ST	0.58
1063153	HORSESHOE LN	0.40
1060027	HORSLEY ST	0.26
1063156	HORTON RD	2.14
1060111	HORWOOD RD	0.61
1062140	HOUSTON ST	1.09
1062515	HOVEA CT	0.13
1061174	HUBERT ST	0.85
1061054	HUDMAN RD	1.78
1061151	HUDSON ST	0.21
1063062	HUMMERSTON ST	1.33
1062541	HUMPHREY RD	0.33
1063185	HUXHAM GLEN	0.11
1063113	ILBERY ST	0.53
1063282	ILICH COURT	0.12
1060133	INNAMINCKA RD	1.44
1063165	INNISFREE PLACE	0.40
1062057	IRON RD	0.26
1063044	IRYMPLE RD	0.74
1062521	JACOBY ST	4.24
1060073	JAMES ST	0.24

1061165	JANE ST	0.16
1062537	JANECZEK RD	0.31
1062095	JARRAH RD	1.95
1063120	JASON ST	0.66
1061179	JELICOE RD	1.60
1060020	JENARK WAY	0.06
1063243	JINDALEE PLACE	0.20
1062000	JOHN FORREST NP RD	5.60
1061139	JOHN MOORE CT	0.11
1061083	JOHN ST	0.28
1062042	JOHNSTON RD	1.20
1063059	JOHNSTON ST	1.03
1063104	JORDAN RD	0.90
1061147	JOSCELYN PL	0.14
1063046	JOSEPH RD	1.82
1062569	KALANG PLACE	0.38
1063188	KALARI WAY	0.20
1062530	KAMBALDA RD	0.29
1063290	KANANGRA COURT	0.25
1060186	KANYA CT	0.08
1063244	KARDAN CLOSE	0.26
1062591	KARL PL	0.08
1061029	KATHARINE PL	0.19
1061009	KATHARINE ST	1.90
1063248	KEANE ST EAST	0.92
1063269	KEANE ST SCHOOL ACCESS	0.44
1063024	KEANE ST WEST	1.06
1063089	KEENAN RD	1.05
1061018	KELLAR PL	0.12
1063291	KENDON PL	0.05
1063223	KENMORE RD	0.86
1062096	KENSITT RD	0.38
1063101	KERUN RD	0.52
1062105	KEVIN ST	0.47
1062034	KILBURN RD	2.25
1062080	KILIMA CL	0.09
1063030	KIMBER PL	0.18
1060071	KINGSFIELD AVE	0.45
1063045	KINGSTON RD	1.51
1063077	KINGSWOOD ST	0.71
1062035	KINTORE RD	2.10
1061188	KIRIP CT	0.07
1061090	KIRKCALDY GR	0.08
1062130	KIRKSTALL WY	0.71
1061058	KOOKABURRA PL	0.26
1062151	KURAMUN PL	0.28
1061111	KURANDA PL	0.24
1060097	KYLE PL	0.06
1062158	LA GRANGE RD	1.36
1062056	LACEY RD	1.84
1062115	LACEY ST	0.67
1063097	LAKE VIEW RD	0.43
1063224	LAKESIDE DR	1.92
1063060	LANCE ST	0.89
1063009	LAPOINYA PL	0.45
1063205	LASLETT CIRCLE	0.96
1062505	LAUFFER WY	0.44
1061167	LAWRENCE CL	0.23
1061093	LAWSON WY	0.18
1063228	LEATHER GREEN	0.17

1061044	LEAWOOD CR	0.39
1062113	LEE RD	0.25
1063105	LEITH ST	0.53
1061075	LEITHDALE RD	0.44
1062110	LEMMEY RD	0.24
1063211	LENO CRT	0.14
1061095	LESCHEN WY	0.44
1063147	LESCHENAULTIA PL	0.92
1062067	LESLIE ST	0.29
1063099	LIBERTON RD	6.52
1062533	LIBRARY LA	0.11
1061019	LIFFORD WY	0.41
1063100	LILYDALE RD	4.09
1061195	LINDSAY PL	0.28
1063132	LINLEY VALLEY RD	3.17
1060127	LINTHORN CR	0.37
1063066	LION ST	2.24
1061116	LIONEL RD	1.55
1060025	LISTER ST	0.27
1063007	LLANGI WY	1.61
1061105	LOBELIA DR	0.54
1063111	LOCKWOOD RD	1.58
1060163	LONE PINE WY	0.15
1060050	LUCAS RD	0.08
1060173	LUFFE CT	0.22
1063208	LUHRS CRT	0.15
1061163	LUKIN AVE	1.00
1061071	LUMEAH CT	0.11
1062587	LYON PL	0.27
1063278	MACK CRT	0.15
1062562	MADDOCK ST	0.12
1063190	MAGEE PLACE	0.14
1061040	MAGUIRE RD	0.45
1062137	MALABAR RD	0.87
1060183	MALONE RD	0.21
1061066	MANDOON CL	0.18
1061157	MANJIRI DR	0.48
1062059	MANN ST	0.18
1060028	MANSON ST	0.24
1063229	MAPLE CR	0.38
1062004	MARGARET RD	1.55
1060044	MARKHAM WAY	0.91
1063174	MARKWELL PLACE	0.31
1060041	MARLBORO RD	0.78
1060131	MARLOO RD	0.69
1061122	MARNIE RD	2.17
1063028	MARQUIS ST	0.41
1062507	MARRI RD	0.82
1061047	MARRIOT RD	0.56
1062138	MARSHWOOD PL	0.78
1062119	MARTELL ST	0.20
1062522	MARTIN RD	2.26
1061057	MASLIN CR	0.57
1063202	MASSEY TURN	0.29
1063082	MATHIESON RD	0.74
1062081	MATTHEWS WY	0.61
1061096	MAYHEW RD	0.36
1063128	MAYO RD	2.95
1062551	MCCALLUM RD	1.93
1063250	MCDOWELL LOOP	2.36

1061140	MCGLEW RD	1.03
1063210	MCPHEE CRT	0.10
1063029	MCVICAR PL	0.26
1062584	MEADOW LN	0.25
1060017	MELIADOR WAY	0.55
1061037	MELVILLE CT	0.18
1063090	MEMORIAL AVE	0.11
1063043	MEREBEIN RD	1.07
1060158	MESSINES COURT	0.05
1061046	MICHAEL CR	0.74
1063042	MILDURA RD	1.42
1063222	MILL END	0.12
1062078	MILLIGAN RD	1.70
1061166	MILLS RD	1.53
1063274	MILLSTREAM DRIVE	0.58
1062596	MINDYAH COURT	0.10
1061177	MIRANDA ST	0.12
1062585	MISTY RD	0.15
1061115	MITCHELL RD EAST	0.09
1061080	MITCHELL RD WEST	0.10
1063125	MITCHELL ST	0.31
1062131	MITTON PL	0.11
1063252	MOATA PL	0.07
1061170	MOFFLIN AVE	0.46
1060006	MOIR PL	0.28
1060013	MOIR PL SERVICE RD	0.09
1063281	MOLLOY TRAIL	0.62
1062011	MONS RD	0.60
1061082	MONTROSE AVE	0.18
1062506	MOOLA RD	2.25
1062566	MOORT PLACE	0.09
1061182	MORAY RD	0.26
1062546	MORILLA RD	0.31
1061181	MORRELL RD	0.21
1060001	MORRISON RD	3.11
1061113	MOUNT ST	0.22
1062576	MUELLER PLACE	0.31
1060118	MULBERRY TREE CL	0.19
1062098	MULUMBA PL	0.63
1062538	MUNDARING WEIR RD	7.48
1063163	MUNRO ST	0.18
1063257	MURAUBA PL	0.28
1060078	MURCHISON DR	0.31
1060021	MUROS PL	0.19
1061048	MUSGROVE CR	0.62
1060049	MYLES RD	0.47
1063026	NADELL CT	0.11
1060093	NALYA PL	0.09
1063006	NARANGA PL	0.31
1062583	NARLA RT	0.44
1060094	NARRAN PL	0.15
1060011	NARWOOD PL	0.12
1060082	NATIONAL PARK RD	0.55
1063118	NEEDHAM RD	4.03
1061084	NEILSON CR	0.12
1061176	NELSON RD	1.46
1063056	NEPTUNE ST	2.47
1061125	NEWMAN RD	0.42
1063286	NEWRIC RD	0.07
1063078	NEWTON ST	0.32

1062076	NICHOL ST	0.60
1061136	NICHOLL ST	0.89
1061023	NOEL ST	0.65
1061067	NOONAMEENA PL	0.28
1063093	NORTHCOTE ST	1.23
1061156	NUNDAH CT	0.08
1061137	NYAANIA CT	0.18
1061077	OAKLEIGH RD	0.97
1062514	O'CONNOR RD "MAH CREEK"	3.79
1062084	OLD FARM LA	0.54
1063091	OLD NORTHAM RD	9.42
1062135	OLD SAWYERS RD	0.80
1060101	OLD YORK RD	1.85
1062121	OLIVER ST	0.63
1063094	ONslow ST	0.60
1061036	ORANA PL	0.11
1061035	ORANA WY	0.15
1061061	ORANGE LN	0.11
1061062	ORANGE RD	0.41
1060008	ORCHARD AVE	0.35
1063131	ORCHARD RD	0.60
1060168	ORMOND CL	0.10
1062106	OSBORNE ST EAST	1.51
1061197	OUTLOOK CL	0.28
1061134	OUTTRIM RD	0.10
1061060	OWEN RD	0.63
1062031	OWEN RD	0.53
1061099	OXLEY PL	0.31
1061097	OXLEY RD	0.73
1062002	OXLEY RD	2.19
1063080	PACKER ST	0.38
1061098	PADBURY RD	1.76
1060117	PAGNELL WY	0.42
1063203	PAINTER CR	0.55
1062001	PARK RD	4.87
1060009	PARK ST	0.60
1060090	PARK WAY	0.54
1062025	PARKER RD	1.14
1061196	PARKLAND RD	0.60
1063200	PARKVIEW GARDENS	0.17
1063194	PATRICK PLC	0.22
1063154	PATTERSON RD	0.98
1062539	PATTON RD	0.71
1063245	PAX GROVE	0.20
1062556	PEARCE ST	0.81
1062598	PEARTREE LANE	1.02
1060085	PECHEY RD	2.19
1063085	PENNEL RD	0.20
1063273	PENNY LANE	0.19
1062520	PHILLIPS RD	3.20
1060092	PIMELIA CT	0.21
1061065	PINE TCE	1.01
1061103	PITTERSEN RD	1.36
1063199	PLATANUS PL	0.18
1063183	PLATEAU HEIGHTS	0.23
1060155	POLYGON PLACE	0.20
1062564	POSSUM WAY	0.15
1062597	PRETTY LANE	0.65
1063032	PRINCESS RD	0.62
1061201	PRITCHARD RD	0.15

1063110	PROGRESS DR	1.20
1063015	PROSPERITY RD EAST	1.19
1062125	PROSPERITY RD WEST	0.97
1062568	PROTEA COURT	0.17
1063215	PRUNUS PL	0.15
1060161	PYRMONT PLACE	0.21
1061154	QUARRY CT	0.11
1061049	RABONE WAY	0.29
1061194	RACHEL CT	0.09
1060129	RADBORN ST	0.16
1061020	RADFORD PL	0.10
1063135	RAHNIE RD	2.03
1061149	RAILWAY PDE	0.93
1063247	RAILWAY TCE EAST	1.52
1062109	RAILWAY TCE WEST	2.28
1062044	RAINSFORD WY	0.30
1061013	RANGEVIEW DR	0.25
1060029	RAY RD	0.11
1062532	REDDY AVE	0.69
1062037	REDFERN RD	0.27
1061016	REDGUM AVE	0.68
1063219	REDUNCA CL	0.19
1060169	REEVES PL	0.13
1063204	REIGER WAY	0.19
1060177	REMEMBRANCE GR	0.11
1063084	RESERVOIR RD	0.93
1060048	RHINE WY	0.26
1062020	RICHARDSON RD	5.49
1062503	RICKARD RD	0.44
1061041	RIDGE HILL RD	1.00
1061159	RIDGE RD	0.38
1062579	RIDGEWAY PLACE	0.14
1062029	RILEY RD	6.69
1063021	RILEY RD	0.51
1063221	RIVERDALE RD	0.57
1060130	ROBERTS PL	0.08
1063212	ROBINIA RISE	0.28
1061102	ROBINSON CT	0.11
1061100	ROBINSON RD	0.50
1062510	ROBINSON RD	0.63
1062033	ROLAND RD	4.37
1063088	ROSEDALE RD	5.04
1060180	ROTHSCHILD PLACE	0.46
1063027	ROYSTON PL	0.26
1060018	RUNYON RD	0.34
1060137	RUSSELL RD	0.20
1061161	RYECROFT RD	2.07
1062094	SADLIER CT	0.30
1060187	SALISBURY RD EAST	0.63
1060002	SALISBURY RD WEST	0.39
1061202	SAMSON PL	0.20
1061030	SAMSON ST	0.38
1062560	SAMSON ST	0.71
1063040	SAMUEL ST	0.61
1061064	SANDOVER RD	0.28
1061068	SAW DR	0.65
1063253	SAWMILLERS CRT	0.39
1063057	SAWYERS RD	2.74
1062058	SCHOCH RD	0.68
1061005	SCOTT ST	0.36

1061007	SCOTT ST	1.50
1062022	SEABORNE ST	2.13
1061128	SEALEY RD	0.18
1062540	SELKIRK RD	0.24
1063187	SERTORIO RD	0.51
1060152	SETTLER PLACE	0.17
1062120	SEXTON ST	2.64
1061183	SHEPHERD ST	0.44
1063016	SHORT ST	1.78
1063289	SILIA RETREAT	0.66
1063081	SIME RD	2.04
1063112	SIMMONS ST	0.50
1063151	SITTELLA RT	0.68
1063171	SLAYTER PLACE	0.21
1062049	SMEATON RD	0.29
1061127	SMITH ST	0.61
1063239	SNOWDEN RD	0.14
1061017	SPICER PL	0.08
1062040	SPRING RD	0.13
1063178	SPRINGBANK CLOSE	0.26
1061148	SPRINGSIDE CR	0.26
1063166	SQUARCINI CLOSE	0.96
1060007	STANHOPE GDNS	0.61
1061145	STANLEY ST	0.45
1063137	STANWIX PLACE	1.08
1063189	STAPLEFORD PLACE	0.12
1061152	STATHAM ST	0.51
1062128	STEPHENSON RD	0.21
1062062	STEVENS ST	2.58
1060128	STIRLING CLOSE	0.48
1060113	STIRLING RD	0.43
1063259	STOKES CL	0.25
1061088	STONE CR	0.97
1063098	STONE RD	1.63
1062112	STONELEIGH RD	1.23
1062066	STONEVILLE RD	7.91
1062123	STRETCH RD	1.07
1061192	STRETTLE RD	3.23
1060146	STUART ST	0.31
1062064	SUMMIT RD	0.67
1063196	SUNDOWNER GROVE	0.26
1062079	SUNNINGHILL RD	0.44
1060178	SUNSET HILL RD	0.36
1062159	SUNSET WY	0.66
1062592	SUTCLIFFE RD	0.31
1060109	SWAN RD	0.43
1062511	SWAN RD	0.63
1060105	SWAN VIEW RD	1.51
1060086	TAAFFE RD	0.27
1060066	TALBOT RD	0.47
1063214	TALLOW GR	0.13
1062092	TAMBLYN PL	0.07
1063014	TANNAH WY	0.52
1061189	TAREE ST	0.19
1063102	TARRUP ST	2.68
1062104	TASSELL PL	0.16
1063109	TEAR ST	0.28
1062075	TEE AVE	0.15
1063158	TEN ACRE WAY	0.18
1060121	THAXTED PL	0.10

1060095	THE BEACON	0.10
1061038	THE CRESCENT	0.51
1062052	THOMAS RD	0.64
1062502	THOMAS RD	3.49
1063083	THOMAS RD	1.11
1062581	THORNBILL PLACE	0.40
1062061	THORNBURY CL	0.23
1063155	THORNWICK CR	1.04
1060096	THROSSELL RD	1.35
1062118	THROSSELL ST	0.79
1061129	TILLBROOK ST	0.70
1063288	TIMBERTOP WAY (EAST)	0.42
1063287	TIMBERTOP WAY (WEST)	0.70
1063213	TIPUANA RISE	0.24
1063207	TOBIAS CRT	0.22
1063079	TOBIN ST	0.22
1063272	TOMALLAN CLOSE	0.43
1062014	TOMLINSON RD	0.41
1063167	TORQUATA BLVD	1.02
1060042	TORRENS ST	0.18
1063092	TOTTENHAM RD	0.86
1061101	TOWERHILL CT	0.26
1063276	TRANQUIL PL	0.12
1060043	TRAVERS WY	0.34
1062097	TRAYLEN RD	2.41
1063181	TREE GLEN	0.12
1062069	TSAVO ST	0.53
1063143	TUDOR PARK RD	0.99
1061135	TUFFIN RD	0.23
1060072	TUNNEL RD	0.85
1060151	TURF COURT	0.05
1062074	TURVEY LANE	0.17
1060184	TWIN VIEW	0.14
1061069	VALEST PL	0.11
1062063	VALLEY VIEW RD	0.24
1061104	VERBENA AVE	0.09
1060139	VERNAL VALE	0.22
1062524	VERNON AV	0.72
1061055	VICTOR RD	2.04
1060004	VICTORIA PDE	0.88
1062013	VICTORIA RD	3.26
1061063	VIEW TCE	0.46
1060089	VIEWWAY	0.14
1060167	VINEYARD RW	0.14
1062586	VISTA DR	0.88
1060080	VIVEASH RD	1.93
1061050	VIVIAN WAY	0.51
1060060	VOLICH PL	0.07
1063126	WADE ST	0.40
1062070	WALKER ST	1.94
1063073	WALKER ST	0.17
1063148	WALLABY WY	0.29
1060099	WALLIS CT	0.17
1062545	WANDEARA CR	1.30
1060098	WANDU RD	0.57
1060103	WARD AVE	0.46
1063117	WARRIGAL WY	2.42
1062594	WATTLE CT	0.23
1060047	WATTON CT	0.11
1061112	WAYLEN RD	0.38

1063138	WEDGE ST	1.02
1060174	WEEMA CT	0.07
1062553	WEIR VILLAGE RD	0.55
1060116	WELBOURN RD	0.36
1060030	WELD RD	0.82
1062015	WELLER RD	0.46
1063261	WELSH GLEN	0.34
1063133	WERRIBEE RD	4.65
1063275	WERRIBEE RD (SERVICE RD)	1.49
1060079	WESTON DR	0.60
1061110	WESTVIEW PL	0.09
1063242	WHITE GUM GLEN	0.22
1063226	WHITE OWL RISE	0.27
1063075	WHITE ST	0.52
1063051	WHITLAM ST	2.49
1063284	WILDBERRY DR	1.20
1063255	WILDFLOWER GROVE	0.24
1063068	WILKINS RD	0.85
1063086	WILLCOX ST	1.74
1063041	WILLIAM RD	1.72
1061143	WILLIAM ST	0.37
1060182	WILLOUGHBY WAY	0.18
1061025	WILNA PL	0.15
1062007	WILSON RD	1.02
1063123	WILSON RD	0.33
1062046	WILURA RD	0.56
1060188	WILYAN PLACE	0.03
1062026	WINDOO RD	0.28
1063124	WISHART ST	0.17
1060126	WOODBIDGE DR	0.48
1063184	WOODFIELD CLOSE	0.21
1063283	WOODLANDS RD	2.16
1063271	WOODLEA PLACE	0.23
1060124	WOOLOOMOOLOO RD	1.09
1060138	WOLOWRA RD	0.46
1060147	WORTLEY RD	0.33
1063280	YALLARA RISE	0.24
1062599	YARRI GROVE	0.11
1062516	YELVERTON RD	0.34
1062531	YILGARN ST	0.46
1063279	ZAMIA CT	0.29

Appendix

4

APPENDIX 4

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

* = Weed species

P = Priority species

R = Rare species

<i>Acacia alata</i> var. <i>alata</i>	<i>Alternanthera nodiflora</i>
<i>Acacia aphylla</i> R	* <i>Amaranthus albus</i>
<i>Acacia applanata</i>	<i>Amphipogon amphipogonoides</i>
<i>Acacia auronitens</i>	<i>Amphipogon debilis</i>
<i>Acacia baileyana</i>	<i>Amphipogon laguroides</i>
<i>Acacia barbinervis</i> subsp. <i>barbinervis</i>	<i>Amphipogon laguroides</i> subsp. <i>havelii</i>
<i>Acacia costata</i>	<i>Amphipogon laguroides</i> subsp. <i>laguroides</i>
<i>Acacia dentifera</i>	<i>Amphipogon strictus</i>
<i>Acacia drummondii</i> subsp. <i>affinis</i> P3	<i>Amphipogon turbinatus</i>
<i>Acacia drummondii</i> subsp. <i>drummondii</i>	<i>Amyema miquelii</i>
<i>Acacia drummondii</i> subsp. <i>elegans</i>	<i>Amyema preissii</i>
<i>Acacia ephedroides</i>	* <i>Anagallis arvensis</i>
<i>Acacia ericifolia</i>	* <i>Anagallis arvensis</i> var. <i>caerulea</i>
<i>Acacia extensa</i>	<i>Anarthria gracilis</i>
<i>Acacia horridula</i> P3	<i>Anarthria humilis</i>
<i>Acacia huegelii</i>	<i>Anarthria laevis</i>
<i>Acacia incrassata</i>	<i>Andersonia aristata</i>
<i>Acacia lasiocarpa</i> var. <i>sedifolia</i>	<i>Andersonia heterophylla</i>
<i>Acacia latipes</i> subsp. <i>latipes</i>	<i>Andersonia lehmanniana</i>
<i>Acacia microbotrya</i>	<i>Andersonia lehmanniana</i> subsp. <i>lehmanniana</i>
<i>Acacia nervosa</i>	<i>Anigozanthos bicolor</i>
<i>Acacia obovata</i>	<i>Anigozanthos bicolor</i> subsp. <i>bicolor</i>
<i>Acacia oncinophylla</i> subsp. <i>oncinophylla</i> P3	<i>Anigozanthos humilis</i>
<i>Acacia preissiana</i>	<i>Anigozanthos humilis</i> subsp. <i>humilis</i>
<i>Acacia pulchella</i> var. <i>glaberrima</i>	<i>Anigozanthos manglesii</i>
<i>Acacia pulchella</i> var. <i>goadbyi</i>	<i>Anigozanthos manglesii</i> subsp. <i>manglesii</i>
<i>Acacia pulchella</i> var. <i>pulchella</i>	<i>Anigozanthos viridis</i>
* <i>Acacia pycnantha</i>	<i>Anthocercis anisantha</i> subsp. <i>anisantha</i>
<i>Acacia restiacea</i>	<i>Anthocercis gracilis</i> R
<i>Acacia rigida</i>	<i>Aotus cordifolia</i> P3
<i>Acacia saligna</i> subsp. <i>lindleyi</i>	<i>Aphelia brizula</i>
<i>Acacia saligna</i> subsp. <i>pruinescens</i>	<i>Aphelia cyperoides</i>
<i>Acacia saligna</i> subsp. <i>saligna</i>	* <i>Arctotheca calendula</i>
<i>Acacia sessilis</i>	<i>Aristida holathera</i>
<i>Acacia stenoptera</i>	* <i>Aristida ramosa</i>
<i>Acacia teretifolia</i>	<i>Arnocrinum preissii</i>
<i>Acacia urophylla</i>	* <i>Asparagus officinalis</i>
<i>Acacia willdenowiana</i>	<i>Astartea affinis</i>
* <i>Acaena echinata</i> var. <i>tylacantha</i>	<i>Astartea leptophylla</i>
<i>Acarospora citrina</i>	<i>Astartea scoparia</i>
<i>Actinobole uliginosum</i>	<i>Asteridea pulverulenta</i>
<i>Actinotus glomeratus</i>	<i>Asterolasia pallida</i>
<i>Actinotus leucocephalus</i>	<i>Asterolasia pallida</i> subsp. <i>pallida</i>
<i>Adenanthos barbiger</i> subsp. <i>barbiger</i>	<i>Astroloma ciliatum</i>
<i>Adenanthos cygnorum</i>	<i>Astroloma compactum</i>
<i>Adenanthos cygnorum</i> subsp. <i>chamaephyton</i> P3	<i>Astroloma pallidum</i>
<i>Adenanthos cygnorum</i> subsp. <i>cygnorum</i>	<i>Astroloma xerophyllum</i>
<i>Adenanthos filifolius</i> P3	* <i>Atriplex exilifolia</i>
<i>Adiantum aethiopicum</i>	<i>Austrodanthonia acerosa</i>
<i>Agrostocrinum hirsutum</i>	<i>Austrodanthonia caespitosa</i>
* <i>Aira cupaniana</i>	<i>Austrodanthonia pilosa</i>
<i>Albuca canadensis</i>	<i>Austrodanthonia setacea</i>
<i>Alexgeorgea nitens</i>	<i>Austrostipa campylachne</i>
<i>Allocasuarina fraseriana</i>	<i>Austrostipa compressa</i>
<i>Allocasuarina huegeliana</i>	<i>Austrostipa elegantissima</i>
<i>Allocasuarina humilis</i>	<i>Austrostipa flavescens</i>
<i>Allocasuarina thuyoides</i>	<i>Austrostipa hemipogon</i>
<i>Alstroemeria psittacina</i>	<i>Austrostipa mollis</i>
<i>Alternanthera denticulata</i>	<i>Austrostipa tenuifolia</i>

Austrostipa variabilis
**Avena barbata*

**Baeckea camphorosmae*
Baeckea crispiflora
Baeckea crispiflora var. *tenuior*
Baeometra uniflora
Banksia grandis
Banksia ilicifolia
Banksia littoralis
Banksia prionotes
Banksia sphaerocarpa var. *sphaerocarpa*
**Bartsia trixago*
Baumea arthropophylla
Baumea articulata
Baumea juncea
Baumea preissii subsp. *laxa*
Baumea rubiginosa
Baumea vaginalis
Beaufortia macrostemon
Beaufortia purpurea
Beyeria lechenaultii
**Bidens pilosa*
Billardiera floribunda
Billardiera fraseri
Billardiera fusiformis
Billardiera heterophylla
Blennospora drummondii
Boronia crenulata var. *crenulata*
Boronia cymosa
Boronia ovata
Boronia ramosa subsp. *anethifolia*
Boronia ramosa subsp. *ramosa*
Boronia spathulata
Boronia subsessilis
Boronia tenuis **P4**
Borya sphaerocephala
Bossiaea aquifolium subsp. *aquifolium*
Bossiaea eriocarpa
Bossiaea ornata
Bossiaea pulchella
Bossiaea sp. *Waroona*
Bossiaea spinescens
Brachyscome ciliaris
Brachyscome iberidifolia
Brachyscome pusilla
**Briza maxima*
**Briza minor*
**Bromus hordeaceus*
Buellia substellulans
Bulbine semibarbata
Burchardia congesta
Burchardia multiflora

Caesia micrantha
Caladenia arenicola
Caladenia arrecta **P4**
Caladenia denticulata
Caladenia discoidea
Caladenia flava subsp. *flava*
Caladenia footeana
Caladenia hiemalis
Caladenia hirta subsp. *hirta*
Caladenia latifolia
Caladenia longicauda subsp. *longicauda*
Caladenia longiclavata
Caladenia macrostylis
Caladenia marginata
Caladenia nana subsp. *nana*

Caladenia nobilis
Caladenia paludosa
Caladenia reptans subsp. *reptans*
Calectasia narragara
Callistachys lanceolata
Callistemon phoeniceus
Calothamnus hirsutus
Calothamnus quadrifidus
Calothamnus sanguineus
Calothamnus torulosus
Calycopeplus paucifolius
Calytrix angulata
Calytrix aurea
Calytrix depressa
Calytrix glutinosa
Calytrix sp. *Scarp*
Calytrix variabilis
Candelariella xanthostigmoides
Cassytha glabella
Cassytha glabella forma *casuarinae*
Cassytha glabella forma *glabella*
Cassytha pomiformis
Cassytha racemosa
Cassytha racemosa forma *racemosa*
**Casuarina cunninghamiana* subsp. *cunninghamiana*
Centaurium spicatum
**Centaurium tenuiflorum*
Centrolepis aristata
Centrolepis drummondiana
Centrolepis pilosa
**Cerastium glomeratum*
Chamaecytisus palmensis
Chamaescilla corymbosa var. *corymbosa*
Chamaescilla spiralis
Chamaescilla versicolor
Chamaexeros serra
**Chasmanthe floribunda*
Cheilanthes austrotenuifolia
Cheilanthes distans
Cheilanthes sieberi subsp. *sieberi*
Cheiranthra preissiana
Chloris truncata
Chorizandra enodis
Chorizandra multiarticulata
Chorizema aciculare subsp. *laxum*
Chorizema cordatum
Chorizema dicksonii
**Chrysanthemoides monilifera* subsp. *monilifera*
**Cicendia filiformis*
Cichorium intybus
Cladia aggregata
Cladia ferdinandii
Cladia schizopora
Cladonia capitellata
Cladonia cervicornis subsp. *verticillata*
Cladonia rigida
Cladonia southlandica
Clematis aristata var. *occidentalis* **Y**
Clematis pubescens
Comesperma calymega
Comesperma ciliatum
Comesperma virgatum
Comesperma volubile
Conospermum acerosum subsp. *acerosum*
Conospermum densiflorum subsp. *densiflorum*
Conospermum huegelii
Conospermum stoechadis subsp. *stoechadis*
Conostephium pendulum
Conostylis aculeata subsp. *aculeata*
Conostylis aculeata subsp. *bromelioides*

Conostylis androstemma
Conostylis aurea
Conostylis candicans subsp. *candicans*
Conostylis caricina subsp. *caricina*
Conostylis juncea
Conostylis serrulata
Conostylis setigera
Conostylis setigera subsp. *setigera*
Conostylis setosa
Convolvulus remotus
 **Conyza sumatrensis*
Corrigiola litoralis
 **Cortaderia selloana*
Corymbia calophylla
Corynotheca micrantha
Craspedia variabilis
Crassula alata
Crassula closiana
Crassula colorata
Crassula decumbens var. *decumbens*
Crassula extrorsa
Crassula natans
Crassula peduncularis
 **Crepis foetida* subsp. *foetida*
Cristonia biloba
Cryptandra arbutiflora var. *arbutiflora*
Cryptandra mutila
Cryptandra myriantha
Cryptandra nutans
 **Cucumis myriocarpus*
Cyanicula gemmata
Cyanicula ixiooides subsp. *ixiooides* **P4**
Cyanicula sericea
Cyathochaeta avenacea
Cyathochaeta clandestina
Cymbopogon obtectus
 **Cynodon dactylon*
 **Cyperus congestus*
 **Cyperus polystachyos*
 **Cyperus tenellus*
 **Cyperus tenuiflorus*

Dampiera alata
Dampiera coronata
Dampiera lavandulacea
Dampiera lindleyi
Dampiera linearis
Dampiera trigona
Darwinia apiculata **R**
Darwinia citriodora
Darwinia pimelioides **P4**
Darwinia thymoides
Darwinia thymoides subsp. *thymoides*
Dasypogon bromeliifolius
Datura ferox
Daucus glochidiatus
Daviesia angulata
Daviesia cordata
Daviesia decurrens
Daviesia divaricata subsp. *divaricata*
Daviesia hakeoides
Daviesia hakeoides subsp. *hakeoides*
Daviesia hakeoides subsp. *subnuda*
Daviesia horrida
Daviesia longifolia
Daviesia nudiflora
Daviesia nudiflora subsp. *nudiflora*
Daviesia oxylobium **P4**
Daviesia physodes
Daviesia polyphylla

Daviesia preissii
Daviesia rhombifolia
Desmocladus asper
Desmocladus fasciculatus
Deyeuxia quadriseta
Dianella revoluta var. *divaricata*
Dichelachne crinita
Dichopogon capillipes
Dichopogon preissii
Dillwynia sp.
Dioscorea hastifolia
Diplolaena andrewsii **P2**
Diplolaena drummondii
Diplolaena graniticola
Diplopeltis huegelii
Diplopeltis huegelii subsp. *lehmannii*
 **Diploptaxis muralis*
Disa bracteata
Dischisma capitatum
 **Dittrichia graveolens*
Diuris brumalis
Diuris corymbosa
Diuris longifolia
Diuris magnifica
Dodonaea ceratocarpa
Dodonaea ericoides
Dodonaea viscosa subsp. *angustissima*
Drakaea gracilis
Drosera bulbosa
Drosera callistos
Drosera erythrogyne
Drosera erythrorhiza subsp. *collina*
Drosera erythrorhiza subsp. *magna*
Drosera gigantea subsp. *gigantea*
Drosera glanduligera
Drosera heterophylla
Drosera leucoblasta
Drosera macrantha subsp. *macrantha*
Drosera menziesii
Drosera menziesii subsp. *menziesii*
Drosera menziesii subsp. *penicillaris*
Drosera microphylla
Drosera miniata
Drosera pallida
Drosera porrecta
Drosera rosulata
Drosera stolonifera
Drosera tubaestylis
Dryandra arborea
Dryandra armata var. *armata*
Dryandra bipinnatifida subsp. *bipinnatifida*
Dryandra fraseri var. *fraseri*
Dryandra lindleyana subsp. *sylvestris*
Dryandra lindleyana var. *lindleyana*
Dryandra lindleyana var. *mellicula*
Dryandra nivea
Dryandra praemorsa var. *praemorsa*
Dryandra sessilis var. *sessilis*
Dryandra squarrosa subsp. *squarrosa*

**Echium plantagineum*
 **Ehrharta longiflora*
Eleocharis acuta
Elymus scaber
Elythranthera brunonis
Elythranthera emarginata
 **Eragrostis brownii*
 **Eragrostis cilianensis*
Eragrostis elongata
Eremaea fimbriata

Eremaea pauciflora var. *pauciflora*
Eriachne ovata
Ericksonella saccharata
Eriochilus dilatatus subsp. *multiflorus*
Eriochilus dilatatus subsp. *undulatus*
 **Erodium botrys*
 **Erodium moschatum*
Eryngium pinnatifidum
Eryngium pinnatifidum subsp. *pinnatifidum*
Eucalyptus accedens
Eucalyptus laeliae
Eucalyptus marginata
Eucalyptus marginata subsp. *marginata*
Eucalyptus marginata subsp. *thalassica*
Eucalyptus patens
Eucalyptus rudis
Eucalyptus todtiana
Eucalyptus wandoo subsp. *wandoo*
Euchilopsis linearis
 **Euphorbia terracina*

**Ferraria crispa* subsp. *crispa*
 **Festuca arundinacea*
 **Ficus carica*
 **Filago gallica*
Freesia alba x *leichtlinii*
Fumaria bastardii
Fumaria capreolata

**Galium divaricatum*
 **Gastridium phleoides*
Gastrolobium acutum
Gastrolobium alternifolium **C**
Gastrolobium bilobum
Gastrolobium calycinum
Gastrolobium capitatum
Gastrolobium dilatatum
Gastrolobium ebracteolatum
Gastrolobium epacridoides
Gastrolobium hookeri
Gastrolobium retusum
Gastrolobium spathulatum
Gastrolobium spinosum
Gastrolobium villosum
 **Genista linifolia*
Geranium retrorsum
 **Gladiolus alatus*
 **Gladiolus caryophyllaceus*
Gladiolus undulatus
Glischrocaryon aureum
Glischrocaryon aureum var. *angustifolium*
Glischrocaryon aureum var. *aureum*
Gnephosis tenuissima
Gompholobium cyaninum
Gompholobium knightianum
Gompholobium marginatum
Gompholobium ovatum
Gompholobium polymorphum
Gompholobium preissii
Gompholobium shuttleworthii
Gompholobium tomentosum
Gonocarpus cordiger
Gonocarpus nodulosus
Goodenia coerulea
Goodenia fasciculata
Goodenia micrantha
Goodenia pulchella
Goodenia pulchella subsp. *Wheatbelt*
Goodenia pusilla
Grammatotheca bergiana

Gratiola pubescens
Grevillea bipinnatifida
Grevillea bipinnatifida subsp. *bipinnatifida*
Grevillea diversifolia subsp. *diversifolia*
Grevillea endlicheriana
Grevillea flexuosa **R**
Grevillea hookeriana subsp. *apiciloba*
Grevillea manglesii subsp. *dissectifolia* **P3**
Grevillea manglesii subsp. *manglesii*
Grevillea manglesii subsp. *ornithopoda* **P2**
Grevillea paniculata
Grevillea pilulifera
Grevillea pimeleoides **P4**
Grevillea pulchella subsp. *ascendens*
Grevillea quercifolia
Grevillea synapheae subsp. *synapheae*
Grevillea vestita subsp. *vestita*
Grevillea wilsonii
Guichenotia micrantha

Haemodorum discolor
Haemodorum laxum
Haemodorum paniculatum
Haemodorum simplex
Haemodorum simulans
Haemodorum spicatum
Hakea amplexicaulis
Hakea cristata
Hakea cyclocarpa
Hakea erinacea
Hakea incrassata
Hakea lissocarpha
Hakea myrtoides
Hakea petiolaris subsp. *petiolaris*
Hakea prostrata
Hakea ruscifolia
Hakea spathulata
Hakea stenocarpa
Hakea trifurcata
Hakea undulata
Hakea varia
Halgania anagalloides
Halgania corymbosa **P3**
Haloragis tenuifolia **P3**
Helichrysum luteoalbum
Helichrysum macranthum
 **Heliotropium europaeum*
Hemarthria uncinata
Hemiandra linearis
Hemiandra pungens
Hemigenia incana
Hemigenia parviflora
Hemigenia sericea
Hertelidea pseudobotryosa **Y**
 **Hesperantha falcata*
Hibbertia acerosa
Hibbertia amplexicaulis
Hibbertia aurea
Hibbertia commutata
Hibbertia diamesogenos
Hibbertia hemignosta
Hibbertia huegelii
Hibbertia hypericoides
Hibbertia lasiopus
Hibbertia nymphaea
Hibbertia ovata
Hibbertia pachyrrhiza
Hibbertia perfoliata
Hibbertia polystachya
Hibbertia quadricolor

Hibbertia racemosa
Hibbertia serrata
Hibbertia spicata
Hibbertia stellaris
Hibbertia subvaginata
 **Hibiscus diversifolius*
 **Holcus lanatus*
 **Holcus setiger*
Homalosciadium homalocarpum
Hovea chorizemifolia
Hovea pungens
Hovea trisperma
Hyalosperma cotula
Hyalosperma demissum
Hyalosperma simplex subsp. *simplex*
Hybanthus calycinus
Hybanthus floribundus subsp. *floribundus*
Hydatella australis **P2**
Hydrocotyle alata
Hydrocotyle callicarpa
Hydrocotyle pilifera var. *pilifera*
Hyparrhenia hirta
Hypocalymma angustifolium
Hypocalymma robustum
Hypocenomyce australis
 **Hypochoeris glabra*
 **Hypochoeris radicata*
Hypolaena exsulca
Hypoxis gardneri
Hypoxis glabella var. *glabella*
Hypoxis occidentalis
Hypoxis occidentalis var. *quadriloba*

Isolepis cyperoides
Isolepis marginata
Isopogon asper
Isopogon divergens
Isopogon drummondii **P3**
Isopogon dubius
Isopogon sp.
Isopogon sphaerocephalus
Isotoma hypocrateriformis
Isotoma hypocrateriformis var. *cristata*
Isotoma scapigera
Isotropis cuneifolia subsp. *cuneifolia*

Jacksonia alata
Jacksonia angulata
Jacksonia condensata
Jacksonia epiphyllum
Jacksonia floribunda
Jacksonia furcellata
Jacksonia lehmannii
Jacksonia restioides
Jacksonia sternbergiana
Johnsonia pubescens subsp. *pubescens*
 **Juncus bufonius*
 **Juncus caespiticus*
 **Juncus capitatus*
 **Juncus microcephalus*
Juncus pallidus
Juncus planifolius
Juncus subsecundus

Kennedia carinata
Kennedia coccinea
Kennedia prostrata
Kennedia stirlingii
 **Kickxia elatine* subsp. *crinita*
 **Kickxia elatine* subsp. *elatine*

Kingia australis
Kunzea praestans

Labichea lanceolata subsp. *lanceolata*
Labichea punctata
Lachnagrostis filiformis
 **Lactuca serriola* forma *serriola*
Lagenophora huegellii
Lambertia multiflora var. *darlingensis*
Lasiopetalum bracteatum **P4**
Lasiopetalum glabratum
 **Lathyrus tingitanus*
Lawrencella rosea
Laxmannia grandiflora subsp. *grandiflora*
Laxmannia ramosa subsp. *ramosa*
Laxmannia sessiliflora subsp. *australis*
Laxmannia squarrosa
Lechenaultia biloba
Lechenaultia expansa
Lecidea ochroleuca
 **Lepidium didymum*
Lepidobolus preissianus
Lepidosperma effusum
Lepidosperma leptostachyum
Lepidosperma longitudinale
Lepidosperma obtusum
Lepidosperma pruinatum **P3**
Lepidosperma pubisquameum
Lepidosperma scabrum
Lepidosperma sp.
Lepidosperma squamatum
Lepidosperma tetraquetrum
Lepidosperma tuberculatum
Leptoceras menziesii
Leptomeria cunninghamii
Leptospermum erubescens
 **Leptospermum laevigatum*
Lepyrodia heleocharoides **P3**
Lepyrodia macra
Lepyrodia muiirii
Lepyrodia riparia
 Lespedeza juncea* **Y
Leucopogon capitellatus
Leucopogon conostephioides
Leucopogon gracillimus
Leucopogon nutans
Leucopogon propinquus
Leucopogon pulchellus
Leucopogon sp.
Leucopogon sprengelioides
Leucopogon strictus
Leucopogon verticillatus
Levenhookia pusilla
Levenhookia stipitata
 **Linaria maroccana*
Lindsaea linearis
Linum marginale
 **Linum trigynum*
Lobelia alata
Lobelia gibbosa
Lobelia heterophylla
Lobelia rhombifolia
Lobelia rhytidisperma
Lobelia tenuior
Logania campanulata
 **Lolium perenne*
Lomandra brittaniai
Lomandra caespitosa
Lomandra hermaphrodita
Lomandra micrantha subsp. *micrantha*

Lomandra nigricans
Lomandra odora
Lomandra preissii
Lomandra purpurea
Lomandra sericea
Lomandra sonderi
Lomandra sparteae
Lomandra suaveolens
 **Lonicera japonica*
 **Lotus angustissimus*
 **Lotus subbiflorus*
Loxocarya cinerea
 **Lupinus angustifolius*
Luzula meridionalis
Lyginia barbata
Lyginia imberbis
Lyperanthus serratus
Lysinema ciliatum forma

Macarthuria australis
Macrozamia fraseri
Macrozamia riedlei
Marianthus bicolor
Marianthus candidus
Marianthus coeruleopunctatus
 **Marianthus drummondianus*
Meeboldina cana
Meeboldina coangustata
Meeboldina decipiens
Melaleuca aspalathoides
Melaleuca fulgens
Melaleuca incana
Melaleuca incana subsp. *incana*
Melaleuca lateritia
Melaleuca parviceps
Melaleuca preissiana
Melaleuca radula
Melaleuca raphiophylla
Melaleuca seriata
Melaleuca thymoides
 **Melaleuca trichophylla*
Melaleuca viminea subsp. *viminea*
 **Melilotus indicus*
Mesomelaena graciliceps
Mesomelaena pseudostygia
Mesomelaena tetragona
Microcorys longifolia
Microtis alba
Microtis atrata
Microtis media
Microtis media subsp. *media*
Millotia tenuifolia
Mirbelia dilatata
Mirbelia ramulosa
Mirbelia spinosa
 **Misopates orontium*
 **Momordica balsamina*
 **Monoculus monstrosus*
Monopsis debilis
Monotaxis grandiflora
Monotaxis grandiflora var. *grandiflora*
Muehlenbeckia adpressa
Myriophyllum crispatum
Myriophyllum tillaeoides

 **Narcissus papyraceus*
 **Narcissus tazetta*
Neurachne alopecuroidea
Nicotiana rotundifolia
Nuytsia floribunda

**Oenothera mollissima*
Olax benthamiana
 **Olea europaea* subsp. *europaea*
 **Olearia axillaris*
Olearia paucidentata
Opercularia apiciflora
Opercularia echinocephala
Opercularia hispidula
Opercularia vaginata
 **Orobanche minor*
Orthrosanthus laxus var. *gramineus*
Orthrosanthus laxus var. *laxus*
Ottelia ovalifolia
 **Oxalis exilis*
 **Oxalis glabra*
 **Oxalis incarnata*
 **Oxalis purpurea*

 **Papaver somniferum*
Paracaleana nigrata
Paraporphidia glauca
Paraserianthes lophantha subsp. *lophantha*
 **Parentucellia latifolia*
Parietaria debilis
 **Parkinsonia aculeata*
 **Paspalum dilatatum*
Paspalum urvillei
Patersonia babianoides
Patersonia juncea
Patersonia occidentalis
Patersonia occidentalis var. *occidentalis*
Patersonia pygmaea
Patersonia rudis subsp. *rudis*
Pelargonium littorale
 **Pennisetum setaceum*
 **Pennisetum villosum*
Pentapeltis peltigera
 **Pentaschistis pallida*
Pericalymma ellipticum var. *floridum*
Persicaria prostrata
Persoonia angustiflora
Persoonia elliptica
Persoonia hexagona
Persoonia quinquenervis
Persoonia sulcata **P4**
Petrophile biloba
Petrophile heterophylla
Petrophile juncifolia
Petrophile linearis
Petrophile seminuda
Petrophile striata
 **Petrorhagia dubia*
Pheladenia deformis
Philothea spicata
Philydrella drummondii
Philydrella pygmaea
Philydrella pygmaea subsp. *pygmaea*
Phlebocarya ciliata
Phyllangium divergens
Phyllanthus calycinus
 **Phyllanthus tenellus*
Phylloglossum drummondii
Pilostyles hamiltonii
Pimelea angustifolia
Pimelea argentea
Pimelea brevistyla **Y**
Pimelea brevistyla subsp. *brevistyla*
Pimelea ciliata
Pimelea ciliata subsp. *ciliata*
Pimelea imbricata var. *major*

Pimelea imbricata var. *piligera*
Pimelea preissii
Pimelea rara **P4**
Pimelea spectabilis
Pimelea suaveolens subsp. *suaveolens*
Pimelea sylvestris
**Piptatherum miliaceum*
Pithocarpa corymbulosa **P2**
Pithocarpa pulchella var. *melanostigma*
Pithocarpa pulchella var. *pulchella*
Plantago exilis
**Plantago lanceolata*
Platysace filiformis
Platysace juncea
Pleurosorus rutifolius
Pleurosorus subglandulosus
**Poa drummondiana*
**Poa porphyroclados*
**Podalyria sericea*
Podolepis canescens
Podolepis gracilis
Podolepis lessonii
Podotheca gnaphalioides
Pogonolepis stricta
**Polycarpon tetraphyllum*
**Polypogon monspeliensis*
Poranthera drummondii
Poranthera huegelii
Poranthera microphylla
Potamogeton drummondii
Potamogeton ochreatus
Prasophyllum elatum
Prasophyllum fimbria
Prasophyllum giganteum
Prasophyllum gracile
Prasophyllum hians
Prasophyllum macrostachyum
Prasophyllum ovale
Prasophyllum parvifolium
Prasophyllum plumiforme
Pseudocyphellaria neglecta
Pteridium esculentum
Pterochaeta paniculata
Pterostylis barbata
Pterostylis concava
Pterostylis recurva
Pterostylis sanguinea
Pterostylis sp. crinkled leaf
Ptilotus declinatus
Ptilotus drummondii
Ptilotus drummondii var. *drummondii*
Ptilotus esquamatus
Ptilotus gaudichaudii
Ptilotus manglesii
Ptilotus polystachyus var. *polystachyus*
Pultenaea ericifolia
Pyrorchis nigricans

Quinetia urvillei

Ranunculus colonorum
**Ranunculus muricatus*
**Raphanus raphanistrum*
**Retama raetam*
**Rhamnus alaternus*
Rhizocarpon polycarpum
Rhodanthe citrina
Rhodanthe corymbosa
Rhodanthe manglesii
Ricinocarpos undulatus

**Robinia pseudoacacia*
**Romulea rosea* var. *australis*
**Romulea rosea* var. *communis*
**Rosa chinensis* x *moschata*
**Rubus anglocandicans*
**Rubus laudatus*
**Rubus ulmifolius*
**Rubus ulmifolius* var. *ulmifolius*
Rulingia cygnorum

**Salvia verbenaca*
Santalum acuminatum
Scaevola calliptera
Scaevola canescens
Scaevola glandulifera
Scaevola lanceolata
Scaevola phlebotopetala
Scaevola pilosa
Scaevola platyphylla
Scaevola repens var. *repens*
Schoenolaena juncea
Schoenus bifidus
Schoenus brevisetis
Schoenus curvifolius
Schoenus elegans
Schoenus grammatophyllus
Schoenus nanus
Schoenus odontocarpus
Schoenus subflavus
Schoenus unispiculatus
Schoenus variicellae
Scholtzia involucrata
Senecio gilbertii **P1**
Senecio hispidulus var. *hispidulus*
Senecio leucoglossus **P4**
Senecio multicaulis subsp. *multicaulis*
Senecio pinnatifolius var. *latilobus*
**Senecio vulgaris*
**Setaria parviflora*
Sida hookeriana
**Silene vulgaris*
Siloxerus filifolius
Siloxerus humifusus
Siloxerus multiflorus
Siphula coriacea
**Solidago canadensis*
**Sonchus oleraceus*
**Sorghum sudanense*
Sowerbaea laxiflora
**Sparaxis bulbifera*
**Spergula arvensis*
Sphaerolobium medium
Spiculalea ciliata
**Sporobolus africanus*
Stachys arvensis
Stackhousia monogyna
Stackhousia scoparia
Stenanthemum emarginatum
Stenopetalum filifolium
**Stenotaphrum secundatum*
Stipa campylachne
Stirlingia latifolia
Stirlingia simplex
Stylidium affine
Stylidium amoenum
Stylidium amoenum var. *amoenum*
Stylidium amoenum var. *caulescens*
Stylidium androsaceum
Stylidium bulbiferum
Stylidium calcaratum

Stylidium carnosum
Stylidium ciliatum
Stylidium crassifolium
Stylidium cygnorum
Stylidium dichotomum
Stylidium ecorne
Stylidium emarginatum subsp. *emarginatum*
Stylidium eriopodium
Stylidium hispidum
Stylidium inundatum
Stylidium lateriticola
Stylidium leptophyllum
Stylidium lineatum
Stylidium obtusatum
Stylidium petiolare
Stylidium piliferum
Stylidium pubigerum
Stylidium pycnostachyum
Stylidium repens
Stylidium rhynchocarpum
Stylidium scariosum
Stylidium schoenoides
Stylidium sidjamesii
Stylidium sp. Darling Range
Stylidium striatum **P4**
Stylidium thesioides
Stylidium utricularioides
Stypandra glauca
Styphelia tenuiflora
Synaphea acutiloba
Synaphea cuneata
Synaphea decorticans
Synaphea gracillima
Synaphea pinnata
Synaphea spinulosa subsp. *spinulosa*
Syringa vulgaris* **Y

Taraxacum officinale
Taxandria linearifolia
Templetonia drummondii **P4**
Tetraria capillaris
Tetraria octandra
Tetrarrhena laevis
Tetradlea confertifolia
Tetradlea hirsuta
Tetradlea nuda
Tetradlea pilifera **P3**
Tetradlea sp. Granite **P3**
Thelymitra antennifera
Thelymitra benthamiana
Thelymitra crinita
Thelymitra flexuosa
Thelymitra graminea
Thelymitra macrophylla
Thelymitra variegata
Thelymitra villosa
Themeda triandra
Thomasia foliosa
Thomasia glutinosa var. *glutinosa*
Thomasia glutinosa var. *latifolia*
Thomasia grandiflora
Thomasia macrocarpa
Thomasia paniculata
Thryptomene australis subsp. *australis*
Thysanotum hookeri
Thysanotus anceps **P3**
Thysanotus arbuscula
Thysanotus dichotomus
Thysanotus fastigiatus
Thysanotus manglesianus

Thysanotus multiflorus
Thysanotus patersonii
Thysanotus scaber
Thysanotus sparteus
Thysanotus tenellus
Thysanotus thyrsoides
Thysanotus triandrus
Trachymene coerulea subsp. *coerulea*
Trachymene cyanopetala
**Trachymene pilosa*
**Tribolium uniolae*
Tribonanthes brachypetala
Tribonanthes longipetala
Trichocline spathulata
Tricoryne elatior
Tricoryne humilis
**Trifolium angustifolium* var. *angustifolium*
**Trifolium campestre* var. *campestre*
**Trifolium dubium*
Trifolium incarnatum* **Y
Triglochin centrocarpa
Triglochin huegelii
Triglochin linearis
Tripterococcus brunonis
Trithuria bibracteata
**Tritonia lineata*
Trymalium angustifolium
Trymalium floribundum subsp. *floribundum*
Trymalium ledifolium var. *ledifolium*
Trymalium ledifolium var. *rosmarinifolium*
**Typha orientalis*

**Ursinia anthemoides*
Usnea scabrata
Utricularia multifida
Utricularia tenella
Utricularia volubilis

Velleia trinervis
Vellereophyton dealbatum
**Verbascum virgatum*
**Veronica persica*
Verticordia acerosa var. *acerosa*
Verticordia acerosa var. *preissii*
Verticordia densiflora var. *cespitosa*
Verticordia densiflora var. *densiflora*
Verticordia grandiflora
Verticordia huegelii
Verticordia huegelii var. *decumbens*
Verticordia huegelii var. *huegelii*
Verticordia huegelii var. *stylota*
Verticordia insignis subsp. *insignis*
Verticordia pennigera
Verticordia picta
Verticordia plumosa var. *plumosa*
Verticordia serrata var. *ciliata*
Verticordia serrata var. *linearis* **P3**
Villarsia albiflora
Viminaria juncea
**Vitis vinifera*
Vulpia bromoides
**Vulpia myuros*
**Vulpia myuros* var. *megalura*

Wahlenbergia gracilentia
Wahlenbergia multicaulis
Wahlenbergia preissii
Waitzia nitida
Waitzia podolepis
Waitzia suaveolens

**Watsonia borbonica*
**Watsonia knysnana*
**Watsonia marginata*
**Watsonia meriana* var. *bulbillifera*
**Watsonia meriana* var. *meriana*
Wurmbea dioica
Wurmbea dioica subsp. *alba*
Wurmbea pygmaea

Xanthium spinosum
Xanthoparmelia antleriformis
Xanthoparmelia digitiformis
Xanthoparmelia elevata
Xanthoparmelia imitatrix
Xanthoparmelia nana
Xanthoparmelia verrucella
Xanthorrhoea gracilis
Xanthorrhoea preissii
Xanthosia atkinsoniana
Xanthosia candida
Xanthosia ciliata
Xanthosia huegelii
Xanthosia rotundifolia
Xanthosia singuliflora

**Zantedeschia aethiopica*

Appendix

5

APPENDIX 5

Fauna species in the Shire of Mundaring (Source: W.A Museum, 2006)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates:
31.705, 116.001 and 32.066, 116.413

Note: not a comprehensive list.

* represents an introduced species.

BIRD SPECIES		
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Acanthizidae	<i>Acanthiza apicalis</i> <i>Acanthiza chrysorrhoa</i> <i>Acanthiza inornata</i> <i>Gerygone fusca</i> <i>Smicrornis brevirostris</i>	Broad-tailed Thornbill Yellow-rumped Thornbill Western Thornbill Western Gerygone Weebill
Accipitridae	<i>Accipiter fasciatus fasciatus</i> <i>Aquila audax</i> <i>Aquila morphnoides morphnoides</i> <i>Elanus caeruleus axillaris</i> <i>Hamirostra isura</i>	Brown Goshawk Wedge-tailed Eagle Little Eagle Black-winged Kite Square-tailed Kite
Aegothelidae	<i>Aegotheles cristatus cristatus</i>	Australian Owlet-nightjar
Anatidae	<i>Chenonetta jubata</i>	Australian Wood Duck
Ardeidae	<i>Ixobrychus minutus dubius</i>	Little Bittern
Campephagidae	<i>Coracina maxima</i> <i>Lalage tricolor</i>	Ground Cuckoo-shrike White-winged Triller
Casuariidae	<i>Dromaius novaehollandiae</i>	Emu
Climacteridae	<i>Climacteris rufa</i>	Rufous Treecreeper
Columbidae	<i>Phaps chalcoptera</i> <i>Streptopelia chinensis tigrina</i> *	Common Bronzewing Spotted Dove
Corvidae	<i>Corvus bennetti</i>	Little Crow
Cracticidae	<i>Cracticus tibicen</i> <i>Strepera versicolor</i>	Australian Magpie Grey Currawong
Cuculidae	<i>Cacomantis flabelliformis flabelliformis</i> <i>Chrysococcyx basalis</i> <i>Chrysococcyx lucidus plagosus</i> <i>Cuculus pallidus</i>	Fan-tailed Cuckoo Horsfield's Bronze-Cuckoo Pallid Cuckoo
Dicaeidae	<i>Dicaeum hirundinaceum</i>	Mistletoebird
Dicruridae	<i>Grallina cyanoleuca</i> <i>Rhipidura fuliginosa</i> <i>Rhipidura fuliginosa preissi</i>	Magpie-lark Grey Fantail
Falconidae	<i>Falco berigora berigora</i> <i>Falco cenchroides cenchroides</i> <i>Falco longipennis longipennis</i>	Brown Falcon Nankeen Kestrel Little Falcon

	<i>Falco peregrinus</i>	Peregrine Falcon
Halcyonidae	<i>Dacelo novaeguineae</i> * <i>Dacelo novaeguineae novaeguineae</i> * <i>Todiramphus sanctus sanctus</i>	Laughing Kookaburra Laughing Kookaburra Sacred Kingfisher
Hirundinidae	<i>Hirundo nigricans</i>	Tree Martin
Maluridae	<i>Malurus elegans</i> <i>Malurus splendens</i> <i>Stipiturus malachurus westernensis</i>	Red-winged Fairy-wren Splendid Fairy-wren
Megapodiidae	<i>Leipoa ocellata</i>	Malleefowl
Meliphagidae	<i>Acanthorhynchus superciliosus</i> <i>Anthochaera lunulata</i> <i>Lichenostomus virescens</i> <i>Lichmera indistincta indistincta</i> <i>Melithreptus chloropsis</i> <i>Phylidonyris melanops</i>	Western Spinebill Western Wattlebird Singing Honeyeater Brown Honeyeater White-naped Honeyeater Tawny-crowned Honeyeater
Meropidae	<i>Merops ornatus</i>	Rainbow Bee-eater
Motacillidae	<i>Anthus australis australis</i>	Australasian Pipit
Neosittidae	<i>Daphoenositta chrysoptera pileata</i>	
Pachycephalidae	<i>Colluricincla harmonica rufiventris</i> <i>Falcunculus frontatus</i> <i>Pachycephala pectoralis fuliginosa</i> <i>Pachycephala rufiventris rufiventris</i>	Shriketit Rufous Whistler
Pardalotidae	<i>Pardalotus punctatus punctatus</i> <i>Pardalotus punctatus xanthopyge</i> <i>Pardalotus striatus</i> <i>Pardalotus striatus westraliensis</i>	Spotted Pardalote Yellow-rumped Pardalote Striated Pardalote
Passeridae	<i>Neochmia temporalis temporalis</i> <i>Stagonopleura oculata</i>	Red-browed Finch Red-eared Firetail
Petroicidae	<i>Eopsaltria australis griseogularis</i> <i>Eopsaltria georgiana</i> <i>Petroica goodenovii</i> <i>Petroica multicolor campbelli</i>	Western Yellow Robin White-breasted Robin Red-capped Robin
Podargidae	<i>Podargus strigoides brachypterus</i>	
Podicipedidae	<i>Tachybaptus novaehollandiae</i>	Australasian Grebe
Psittacidae	<i>Calyptorhynchus banksii</i> <i>Calyptorhynchus banksii naso</i> <i>Calyptorhynchus baudinii</i> <i>Calyptorhynchus latirostris</i> <i>Glossopsitta porphyrocephala</i> <i>Melopsittacus undulatus</i> <i>Neophema elegans</i> <i>Platycercus icterotis</i> <i>Platycercus spurius</i> <i>Platycercus zonarius semitorquatus</i>	Red-tailed Black Cockatoo Red-tailed Black Cockatoo Long-billed Black Cockatoo Short-billed Black Cockatoo Purple-crowned Lorikeet Budgerigar Elegant Parrot Western Rosella Broad-tailed parrot Twenty-eight Parrot

	<i>Polytelis anthopeplus anthopeplus</i>	Regent Parrot
Rallidae	<i>Gallinula ventralis</i> <i>Porzana pusilla palustris</i> <i>Porzana tabuensis</i>	Black-tailed Native-hen, Spotless Crake
Strigidae	<i>Ninox connivens</i> <i>Ninox novaeseelandiae</i>	Barking Owl Southern Boobook
Sylviidae	<i>Acrocephalus stentoreus gouldi</i>	
Turnicidae	<i>Turnix varia varia</i> <i>Turnix velox</i>	Abrolhos Painted Button-quail Little Button-quail
Tytonidae	<i>Tyto alba</i> <i>Tyto alba delicatula</i>	Barn Owl Eastern Barn-owl
Zosteropidae	<i>Zosterops lateralis gouldi</i>	

MAMMAL SPECIES

Bovidae	<i>Bos Taurus*</i>	European Cattle
Burramyidae	<i>Cercartetus concinnus</i>	Western Pygmy-possum
Canidae	<i>Vulpes vulpes*</i>	Red Fox
Dasyuridae	<i>Antechinus flavipes</i> <i>Antechinus flavipes leucogaster</i> <i>Dasyurus geoffroii</i> <i>Phascogale tapoatafa tapoatafa</i> <i>Sminthopsis dolichura</i> <i>Sminthopsis gilberti</i>	Yellow-footed Antechinus Mardo Chuditch Brush-tailed Phascogale Little Long-tailed Dunnart Gilbert's Dunnart
Equidae	<i>Equus caballus*</i>	Horse
Felidae	<i>Felis catus*</i>	Cat
Leporidae	<i>Oryctolagus cuniculus*</i>	Rabbit
Macropodidae	<i>Macropus eugenii derbianus</i> <i>Macropus fuliginosus</i> <i>Macropus irma</i>	Western Grey Kangaroo Western Brush Wallaby
Molossidae	<i>Mormopterus planiceps</i> <i>Tadarida australis</i>	Southern Freetail-bat White-striped Freetail-bat
Muridae	<i>Hydromys chrysogaster</i> <i>Mus musculus*</i> <i>Rattus rattus*</i>	Water rat House mouse Black rat
Mustelidae	<i>Mustela putorius*</i>	European Polecat
Myrmecobiidae	<i>Myrmecobius fasciatus</i>	Numbat
Peramelidae	<i>Isoodon obesulus fusciventer</i>	
Phalangeridae	<i>Trichosurus vulpecula vulpecula</i>	Common Brushtail Possum
Tachyglossidae	<i>Tachyglossus aculeatus</i>	Short-beaked Echidna

Tarsipedidae	<i>Tarsipes rostratus</i>	Honey Possum
Thylacomyidae	<i>Macrotis lagotis</i>	Bilby
Vespertilionidae	<i>Chalinolobus gouldii</i> <i>Chalinolobus morio</i> <i>Nyctophilus geoffroyi</i> <i>Nyctophilus timoriensis timoriensis</i> <i>Scotorepens balstoni</i> <i>Vespadelus regulus</i>	Gould's wattled Bat Chocolate Wattled Bat Lesser long-eared Bat Greater Long-eared Bat Inland Broad-nosed Bat Southern Forest Bat

REPTILE SPECIES

Agamidae	<i>Ctenophorus ornatus</i> <i>Pogona minor minor</i> <i>Rankinia adelaidensis</i>	Ornate Rock Dragon Bearded Dragon Western Heath Dragon
Boidae	<i>Antaresia stimsoni stimsoni</i> <i>Morelia spilota imbricata</i>	Stimson's python Diamond python
Cheluidae	<i>Chelodina oblonga</i> <i>Pseudemydura umbrina</i>	Narrow-breasted Snake-necked Turtle Western Swamp Tortoise
Elapidae	<i>Acanthophis antarcticus</i> <i>Brachyuropsis semifasciata</i> <i>Demansia psammophis reticulata</i> <i>Neelaps bimaculatus</i> <i>Notechis scutatus</i> <i>Parasuta gouldii</i> <i>Parasuta nigriceps</i> <i>Pseudechis australis</i> <i>Pseudonaja affinis affinis</i> <i>Pseudonaja modesta</i> <i>Pseudonaja nuchalis</i> <i>Simoselaps bertholdi</i>	Southern Death Adder Southern shovel-nosed snake Black-naped snake Tiger snake Gould's snake Black-backed snake King Brown Dugite Ringed Brown Snake Western Brown Snake Jan's banded snake
Gekkonidae	<i>Christinus marmoratus</i> <i>Crenadactylus ocellatus</i> <i>Diplodactylus granariensis</i> <i>Diplodactylus polyophthalmus</i> <i>Diplodactylus pulcher</i> <i>Gehyra variegata</i> <i>Oedura reticulata</i> <i>Strophurus spinigerus</i> <i>Strophurus spinigerus inornatus</i> <i>Underwoodisaurus milii</i>	Southern Marbled Gecko Clawless Gecko Wheat-belt Stone Gecko Speckled Stone Gecko Fine-faced Gecko Tree Dtella Reticulated Velvet Gecko South-western Spiny-tailed Gecko Barking gecko
Pygopodidae	<i>Aprasia pulchella</i> <i>Aprasia repens</i> <i>Delma fraseri fraseri</i> <i>Delma grayii</i> <i>Lialis burtonis</i> <i>Pletholax gracilis gracilis</i> <i>Pygopus lepidopodus</i>	Granite Worm Lizard Sandplain Worm Lizard Fraser's Legless Lizard Side-barred Delma Burton's Legless Lizard Keeled Legless Lizard Common scalyfoot
Scincidae	<i>Acritoscincus trilineatum</i> <i>Cryptoblepharus plagiocephalus</i> <i>Ctenotus australis</i> <i>Ctenotus delli</i> <i>Ctenotus fallens</i> <i>Ctenotus impar</i>	South-western Cool Skink Wall Skink Odd-striped Skink

	<i>Ctenotus labillardieri</i>	Red-legged Skink
	<i>Egernia kingii</i>	King's Skink
	<i>Egernia napoleonis</i>	Southwestern Crevice Skink
	<i>Eremiascincus richardsonii</i>	Banded Skink
	<i>Hemiergis initialis</i>	Five-toed Earless Skink
	<i>Hemiergis quadrilineata</i>	Two-toed Earless Skink
	<i>Lerista christinae</i>	
	<i>Lerista distinguenda</i>	
	<i>Lerista elegans</i>	
	<i>Lerista lineopunctulata</i>	
	<i>Lerista microtis</i>	
	<i>Menetia greyii</i>	Common dwarf skink
	<i>Morethia lineocellata</i>	
	<i>Morethia obscura</i>	Woodland Flecked Skink
	<i>Tiliqua occipitalis</i>	Western Blue-tongued Lizard
	<i>Tiliqua rugosa rugosa</i>	Blue-tongued skinks
Typhlopidae	<i>Ramphotyphlops australis</i>	Southern Blindsnake
	<i>Ramphotyphlops pinguis</i>	
	<i>Ramphotyphlops waitii</i>	
Varanidae	<i>Varanus gouldii</i>	Sand goanna
	<i>Varanus tristis</i>	Black-headed Monitor

FISH SPECIES

Cyprinidae	<i>Carassius auratus*</i>	Goldfish
	<i>Cyprinus carpio*</i>	European Carp
Galaxiidae	<i>Galaxias occidentalis</i>	
Percidae	<i>Perca fluviatilis</i>	Redfin Perch
Poeciliidae	<i>Gambusia affinis*</i>	
	<i>Phalloceros caudimaculatus</i>	

AMPHIBIA SPECIES

Hylidae	<i>Litoria adelaidensis</i>	Slender Tree Frog
	<i>Litoria moorei</i>	Motorbike Frog
Myobatrachidae	<i>Crinia georgiana</i>	Quacking Frog
	<i>Crinia glauerti</i>	Glauert's Froglet
	<i>Crinia insignifera</i>	Squelching Froglet
	<i>Crinia pseudinsignifera</i>	Bleating Froglet
	<i>Geocrinia leai</i>	Lea's Frog
	<i>Heleioporus albopunctatus</i>	Western Spotted Frog
	<i>Heleioporus barycragus</i>	Western Marsh Frog
	<i>Heleioporus eyrei</i>	Moaning Frog
	<i>Heleioporus inornatus</i>	Whooping Frog
	<i>Heleioporus psammophilus</i>	Sand Frog
	<i>Limnodynastes dorsalis</i>	Banjo Frog
	<i>Myobatrachus gouldii</i>	Turtle Frog
	<i>Neobatrachus pelobatoides</i>	Humming Frog
	<i>Pseudophryne guentheri</i>	Crawling Frog

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:

Survey of Roadside Conservation Values in the Shire of Mundaring

- 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.