

# ***Roadside Vegetation and Conservation Values***



***Shire of Wongan-Ballidu***

April 2005  
Roadside Conservation Committee



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## Executive Summary

This report, produced by the Roadside Conservation Committee (RCC) provides an overview of roadside conservation issues relevant to the Shire of Wongan-Ballidu. Primarily providing detailed results of the roadside survey, with accompanying management recommendations, it also briefly describes the natural environment in Wongan-Ballidu.

Aware of the need to conserve roadside remnants, the Shire of Wongan-Ballidu and local community members liaised with the RCC in 2004 to survey roads under their control and management. Surveys to assess the conservation values of roadside remnants were conducted between August and September 2004. The majority (77%) of the Shire's 1,278 km of roadsides were assessed by the RCC for their conservation status and maps produced via a Geographic Information System (GIS).

The survey indicated that high conservation value roadsides covered 27% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 26%. Medium-low and low conservation value roadsides occupied approximately 21% and 26%, respectively. A more detailed analysis of results is presented in Part C of this report.

It is envisaged that the prime use 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 as a road reserve planning and management tool, for example;

- identifying degraded areas for strategic rehabilitation or in need of specific management techniques and weed control programs;
- prioritising roadside vegetation protection and/or rehabilitation programs;
- 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 Wongan-Ballidu to utilise the Roadside Conservation Value map into many facets of its Landcare, tourism, road maintenance operations and Natural Resource Management strategy documents. In addition, the RCC is available to provide assistance with the development of roadside vegetation management plans and associated documents.

# **PART A**

## **OVERVIEW OF ROADSIDE CONSERVATION**

## 1.0 Why is Roadside Vegetation Important?

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

The flora and fauna in these areas are severely disadvantaged and these habitats are typically unreliable for sustaining wildlife due to limited and scarce food resources, increased disease risk and the reduced genetic diversity caused by a diminishing gene pool. Some habitat fragments may be too small to provide the requirements for even a small population; therefore, it is essential to their survival that they have a means of dispersing throughout the landscape. The presence of native vegetation along roadsides often fulfils an important role in alleviating this isolation effect by providing connectivity between bush remnants.

While many roadside reserves are inadequate in size to support many plant and animal communities, they are integral in providing connections between larger areas of potentially more suitable remnant patches. It is therefore important that all native vegetation is protected regardless of the apparent conservation value it contains. It is important to acknowledge that even degraded roadsides have the ability to act as corridors for the dispersal of a variety of fauna.

Other important values of transport corridor remnants are that they:

- are often the only remaining example of original vegetation within extensively cleared areas;
- often contain rare and endangered plants and animals. Currently, roadside plants represent more than 70 per cent of the known populations of DRF and three species are known only to exist in roadside populations;
- provide the basis for our important wildflower tourism industry. The aesthetic appeal of well-maintained roadsides should not be overlooked, and they have the potential to improve local tourism and provide a sense of place;
- often contain sites of Aboriginal and/or European historic or cultural significance;
- provide windbreaks and stock shelter areas for adjoining farmland by helping to stabilise temperature and reduce evaporation.



The Fat-tailed Dunnart has been recorded in the Shire of Wongan-Ballidu.

Photo by G. Barron, 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, and not only in the land adjoining the road reserve; 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 CALM permit are required prior to collection. Guidelines for seed and timber harvesting can be found in Appendix 6.

## 2.0 What are the Threats?

### 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.

### Roadside Clearing

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

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

Amendments to the *Environmental Protection Act* 1986 have put in place a permit application process designed to assess vegetation clearing based upon a number of clearing principles which ensure ecological, conservation and land degradation issues are considered. Under the Act clearing native vegetation requires a permit unless it is for exempt purposes. Maintaining *existing* clearances in transport corridors or the maintenance of *existing* infrastructure does not require a permit, while clearing to *establish* a new road or alignment does require a permit. These amendments are design to provide improved protection for native vegetation, maintain biodiversity and allow for some incidental clearing activities to continue, such as day-to-day farming practices, without the need for a permit. Contact the Department of Environment for further advice.



## 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, but 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 policies on fire management are:

1. Roadside Burning should not take place without the consent of the managing authority;
2. Local Government Authorities should adopt by-laws to control roadside burning;
3. Roadside burning should be planned as part of a total Shire/area Fire Management Plan;
4. Only one side of a road should be burnt in any one year;
5. 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;
6. No firebreaks should be permitted unless the width of the roadside vegetation strip is greater than 20m;
7. 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;
8. In the case of any dispute concerning roadside fire management, the Bush Fires Board 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 retention of some of the scenic values associated with the road and also provide habitat for associated fauna.

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



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

Photo D. Lamont



## Weeds

Weeds are generally disturbance opportunists and as such the road verge often provides a vacant niche 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 67 weed species in the Shire of Wongan-Ballidu, see Appendix 4. The roadside survey recorded populations of 4 weeds, which were then mapped in addition to the roadside conservation values. The 4 nominated weed were:

- African Lovegrass;
- Paterson's curse;
- Wild Oats; and
- Wild Radish.

African lovegrass is an invasive weed worth noting, as it greatly increases the cost of road maintenance, and is becoming more prevalent on roadsides in the Shire of Wongan-Ballidu. African lovegrass tends to grow on the edge of the bitumen, and slowly breaks it up by root penetration thereby allowing moisture to penetrate the road substrate.



**African lovegrass 'bunches' under the grader blade, requiring extra runs to remove it.**

Photo K. Jackson



*Avena fatua*

Photo: J.D. Dodd

**Wild oats often form dense stands, out-competing native plants, particularly grasses.**

Photography by J. Dodd Photo used with the permission of the WA Herbarium, CALM <http://florabase.calm.wa.gov.au/help/photos#reuse>.



*Echium plantagineum*

Photos: R. Knox & J. D.

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

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

## Salinity

Salinity is one of the greatest environmental threats facing Western Australia's agricultural areas, with approximately 1.8 million hectares in the south-west agricultural region already affected to some degree. Dryland salinity has occurred as a consequence of the heavy clearing undertaken in the past, namely the removal of perennial deep-rooted native vegetation and replacement by shallow rooted annual crop vegetation, and the subsequent rising of the water table. Once at the surface, the water evaporates, leaving a white film of salt over the landscape, making it unproductive for current agricultural practices, and severely impacts upon the remaining native vegetation. Without significant changes to the current land use, approximately 3 million hectares will be affected by salinity by 2010-2015, and 6 million hectares, or 30% of the region, by the time a new groundwater equilibrium is reached (Agriculture WA, 2004).

The effect of salinity has not only been restricted to agriculture, but is also having a serious effect on rural townsites and the road networks. The National Land and Resources Audit (2002) warned that, across Australia, some 19,800km of roads, 1,600km of railways and 306 towns are all at a high risk from dryland salinity (The Journal of the Natural Heritage Trust, 2003). It has also been estimated that more than 4,000km (or 5%) of roads in the south west land division of Western Australia are at threat of being degraded by the effects of rising water tables and salinity. Table 1 shows the road lengths potentially affected by salinity in the Shire of Wongan-ballidu and surrounding Shires. Approximately 12.6%, or 175.8 km of roads in the Shire of Wongan-Ballidu are under threat.

Shire	Total Road Length (kms)	Roads Potentially Affected by Salinity – Length in km					
		Highways	Local Roads	Main Roads	Other Roads	Total Affected	% of Total Potentially Affected
Wongan-Ballidu	1,396.9	0.0	127.1	5.8	42.9	175.8	12.6%
Dalwallinu	1,895.7	7.2	114.4	2.7	46.8	171.1	9.0%
Dowerin	831.4	0.0	39.8	1.8	15.3	56.9	6.8%
Moora	1,000.2	4.4	123.8	18.6	127.3	274.1	27.4%
Goomalling	667.0	0.0	46.0	4.0	12.3	62.3	9.3%
Victoria Plains	917.7	1.4	46.7	3.1	26.0	77.2	8.4%

**Table 1. Road lengths potentially affected by salinity in the Shires of Wongan-Ballidu, Dalwallinu, Dowerin, Moora, Goomalling and Victoria Plains.**

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



**Right: Salt affected farmland adjoining the road reserve.**

### 3.0 Legislative Requirements

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

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

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

#### **State legislation:**

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

#### **Commonwealth legislation:**

- *Environment Protection and Biodiversity Conservation Act* 1999

New legislation has been introduced under the *Environmental Protection Act 1986* which 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 provide an outline of these exemptions. Clearing applications are assessed against twelve clearing principles, which look at values such as the;

- biological value of the remnant vegetation,
- potential impact on wetlands 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. Where clearing is for a once-off clearing event such as pasture clearing or an agricultural development for example, an area permit is required. Where ongoing clearing is necessary as part of a maintenance program for road or railway reserves for example, a purpose permit is needed. The exemptions are designed to enable farmers and landholders to continue regular incidental clearing without having to apply for a permit. In the case of Shire road construction and maintenance activities, clearing is allowed to occur if it is to the width and height previously cleared for that purpose. A permit will be required if clearing is needed to establish a new road, widen an existing road surface into roadside vegetation or create a new gravel pit on uncleared land for example.

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

#### 4.0 Special Environment Areas

A Special Environmental Area 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;
- protection of Aboriginal or European cultural sites.

Special Environmental 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 SEA markers. Workers who come across a 'Special Environmental Area' marker in the field should not disturb the area between the markers unless specifically instructed. If in doubt, the Supervisor, Shire Engineer or CEO should be contacted. Western Power and West Net 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 a *Special Environmental Area Register*. This should outline any special treatment, which the site should receive, and be consulted prior to any work being initiated in the area.

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



**Roadside SEA markers are highly visible.**

Photo by K. Jackson



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

## 5.0 Flora Roads

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

Although presently there are no Flora Roads designated within the Shire of Wongan-Ballidu, the roadside survey and the roadside conservation value (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. This has the dual effect of drawing the attention of tourists to the high conservation value roadside and also alerting all that work in the roadside environment that the marked section of roadside requires due care to protect the values present.



**Roadsides are one of the most accessible places for tourists to view wildflowers.**

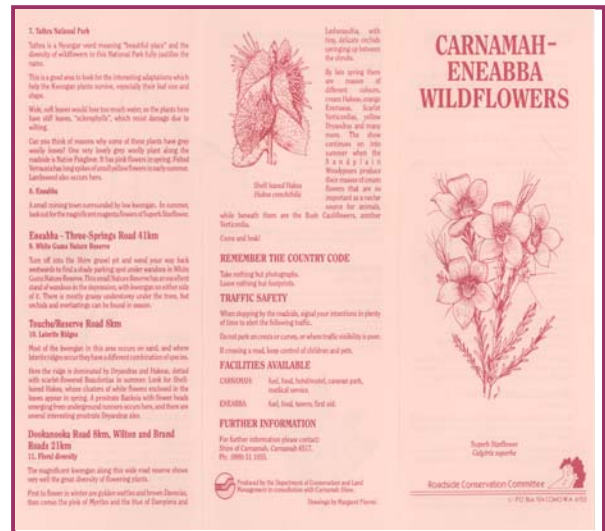
Photo by CALM

In order to plan roadworks so that important areas of roadside vegetation are not disturbed, road managers should know of these areas. It is important to the sustainability of the designated flora roads, that all road managers are aware of the location of flora roads under their control. It is suggested that the Shire establish a *Special Environmental Area Register* important for conservation.

**Below right: The RCC has assisted local communities to produce wildflower drive pamphlets.**

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

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



# PART B

## The Natural Environment in Wongan-Ballidu

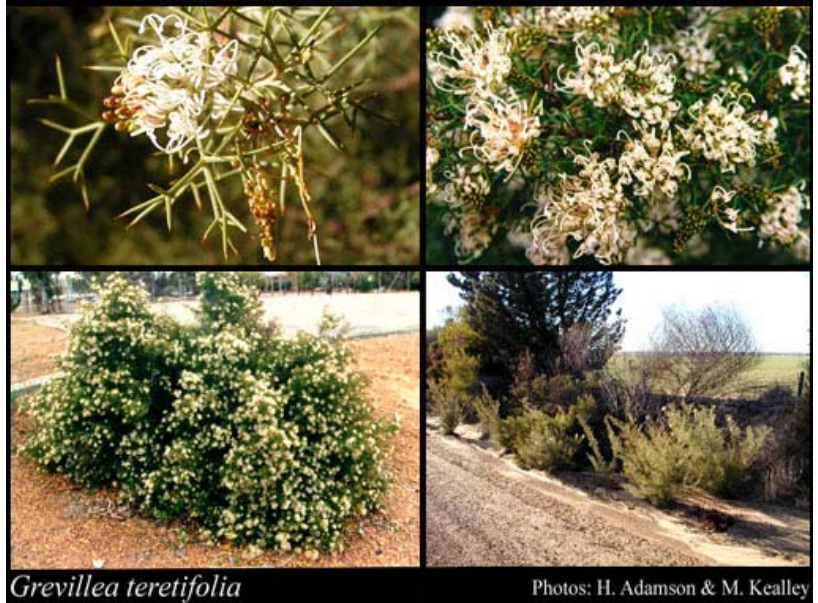
## 1.0 Flora

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. The 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 southwest, are endemic.

The WA Herbarium lists over 1100 species of plants present in the Shire of Wongan-Ballidu. The most prolific genus are Acacia 97 spp, Eucalyptus 64 spp, Grevillea 41 spp, Melaleuca 37 spp, Stylidium 19 spp, and Verticordia 19 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 Special Environmental Areas (SEA's) and are delineated by yellow stakes with an identification plate welded on.



**Round leaf Grevillea (*Grevillea teretifolia*), a native plant of the roadside flora in the Shire of Wongan-Ballidu.**

Photography by H. Adamson, and M Kealley. Photo used with the permission of the WA Herbarium, CALM <http://florabase.calm.wa.gov.au/help/photos#reuse>

It is suggested that the RCC publication *Guidelines for Managing SEA's in Transport Corridors* is used 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 Roadside Conservation Committee. For information regarding DRF, contact the CALM Flora Officer for the Merredin District. If roadworks are to be carried out near DRF sites, it is advisable to contact CALM at least two weeks in advance.

CALM records indicate that fifteen populations of seven DRF species were known from roadsides within the Shire of Wongan-Ballidu (as at January 2005) and eleven of those fifteen sites were vested in the Shire of Wongan-Ballidu. The species of DRF included:

- *Acacia vassalii*
- *Daviesia euphorbioides*
- *Eucalyptus recta*
- *Gastrolobium glaucum*
- *Gastrolobium hamulosum*
- *Grevillea dryandroides subsp dryandroides*
- *Grevillea dryandroides subsp hirsuta*



There were also twenty-four roadside sites where Priority flora species had been recorded, and eighteen of these were vetted in the Shire of Wongan-Ballidu. Priority flora are plants which are considered by CALM to be poorly known and may be threatened, but require further study.

### 3.0 Fauna

The Western Australian Museum records approximately 134 species of native fauna from the Wongan-Ballidu area, listed in Appendix 5. WA Museum fauna records comprise specimen records, museum collections and observations from 1850 to present; therefore it is intended to act only as a general representation of the fauna in the area. Of the native fauna species recorded in the Wongan-Ballidu area, there were 64 bird, 9 amphibia, 14 mammal, and 47 reptile species.

A number of the fauna species recorded from Wongan-Ballidu are classified as endemic to the wheatbelt region of Western Australia, or smaller regions within the State. For example, the Clawless Gecko (*Crenadactylus ocellatus ocellatus*) occurs only within Western Australia's semiarid south-western interior, including the Shire of Wongan-Ballidu.

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 CALM, six species of threatened and priority fauna have been recorded or sighted throughout the Shire of Wongan-Ballidu, and these are listed below.

- Western Spiny-tailed Skink (*Egernia stokesii badia*);
- Shield-backed Trapdoor Spider (*Idiosoma nigrum*);
- Malleefowl (*Leioa ocellata*);
- Western Whipbird (Western heath subsp.) (*Psophodes nigrogularis nigrogularis*);
- Crested Bellbird (southern) (*Oreoica gutturalis gutturalis*); and
- White-browed Babbler (western wheatbelt) (*Pomatostomus superciliosus ashbyi*).

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



**Vassal's Wattle, *Acacia vassalii*, (pictured above) is declared rare and is present within roadsides in the Shire of Wongan-Ballidu.**

Photos by P. Roberts & R. Evans. Photo used with the permission of the WA Herbarium, CALM (<http://florabase.calm.wa.gov.au/help/photos#reuse>)

#### 4.0 Remnant Vegetation Cover

Only 5.2 per cent of the original native vegetation remains in the Shire of Wongan-Ballidu. This is considerably lower than most other Shires in the region, and even these remaining remnants can be depleted if proactive measures are not taken to manage this priceless resource. This figure does not account for land in the pastoral areas of the Shires.

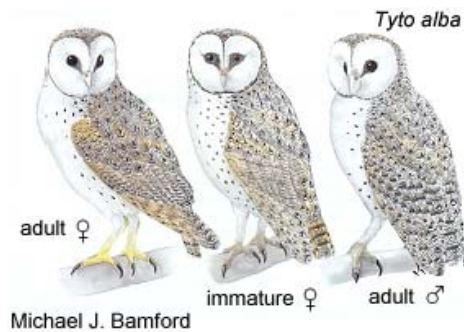
Shire	Total Area (ha)	Area inside Clearing Line (ha)	% Vegetation Cover Remaining (inside clearing line)
Wongan-Ballidu	333,908	333,908	5.2%
Dalwallinu	723,681	595,418	12.0%
Moora	373,148	373,148	13.5%
Victoria Plains	255,291	255,291	13.6%
Goomalling	185,768	185,768	4.6%
Dowerin	188,786	188,786	4.3%
Koorda	283,746	266,057	8.1%

**Table 2. Remnant vegetation remaining in agricultural areas of Wongan-Ballidu and surrounding Shires (Shepherd, Beeston and Hopkins, 2001).**

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



**Tree hollows are of vital importance to breeding birds.**



**The Barn Owl (*Tyto alba*) occurs in the Wongan-Ballidu area.**

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

# **PART C**

## **ROADSIDE SURVEYS IN THE SHIRE OF WONGAN-BALLIDU**

## 1.0 Introduction

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

The majority (980.5 km, or 77%) of the Shire of Wongan-Ballidu's 1,278 km of roadsides were assessed and subsequently mapped to determine the conservation status of the road reserves. Fieldwork was carried out throughout the months of August and September 2004. The enthusiastic efforts of the volunteer roadside surveyors and the support provided by Council and Shire staff ensured that this project was successfully completed. The roadside surveyors were:

- Pam Toster
- Katie Lenane
- Jonathon Rogers
- Corey Turner
- Ian Smith
- Lucinda Thomas
- Tabatha Dedman
- Chris Sadler
- Kathryn Cousins
- Shaune Hillier
- Jenny Latham
- Kathy Sadler
- Bronwen Smith
- Shari Dougall
- Sonya Thomas
- Paul White
- Jack Gulfich

## 1.1 Methods

Roadside surveys were undertaken by two to three community volunteers, and were vehicle-based. The passenger recorded all the roadside survey data using the RCC's hand-held computers (iPAQ's) to record and store the roadside survey data. At the end of the survey, the iPAQ's were sent to the RCC in Perth for analysis and mapping.

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 in Appendix 1. This provides both a convenient and uniform method of scoring.

The following 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.

<u>Conservation Value</u>	<u>Conservation Status</u>	<u>Colour Code</u>
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.

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

## 1.2 Mapping Roadside Conservation Values

The RCC produced a computer-generated map (using a Geographic Information System, or GIS), at a scale of 1:100,000 for the Shire of Wongan-Ballidu. Known as the Roadside Conservation Value (RCV) map, it depicts the conservation status of the roadside vegetation and the width of the road reserves within the Shire of Wongan-Ballidu. 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 CALM, Main Roads WA and the Department of Agriculture 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 9-12, 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



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

Photo K. Jackson.



and/or hollow logs for habitat.

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

- generally intact natural structure, with one layer disturbed or absent;
- extent of native vegetation between 20-80%;
- medium to high diversity of native flora, i.e. between 6-19 species;
- few to half weeds i.e. between 20-80% of the total plants;
- 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 5-6, and generally have the following characteristics:

- natural structure disturbed, i.e. one or more vegetation layers absent;
- extent of native vegetation between 20-80%;
- medium to low diversity of native flora, i.e. between 0-5 species;
- half to mostly weeds, i.e. between 20-80% of total plants;
- 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 0-4, 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 0-5 different species;
- mostly weeds, i.e. more than 80% of total plants, or ground layer totally weeds;
- low value as a biological corridor.



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

Photo by K. Jackson.

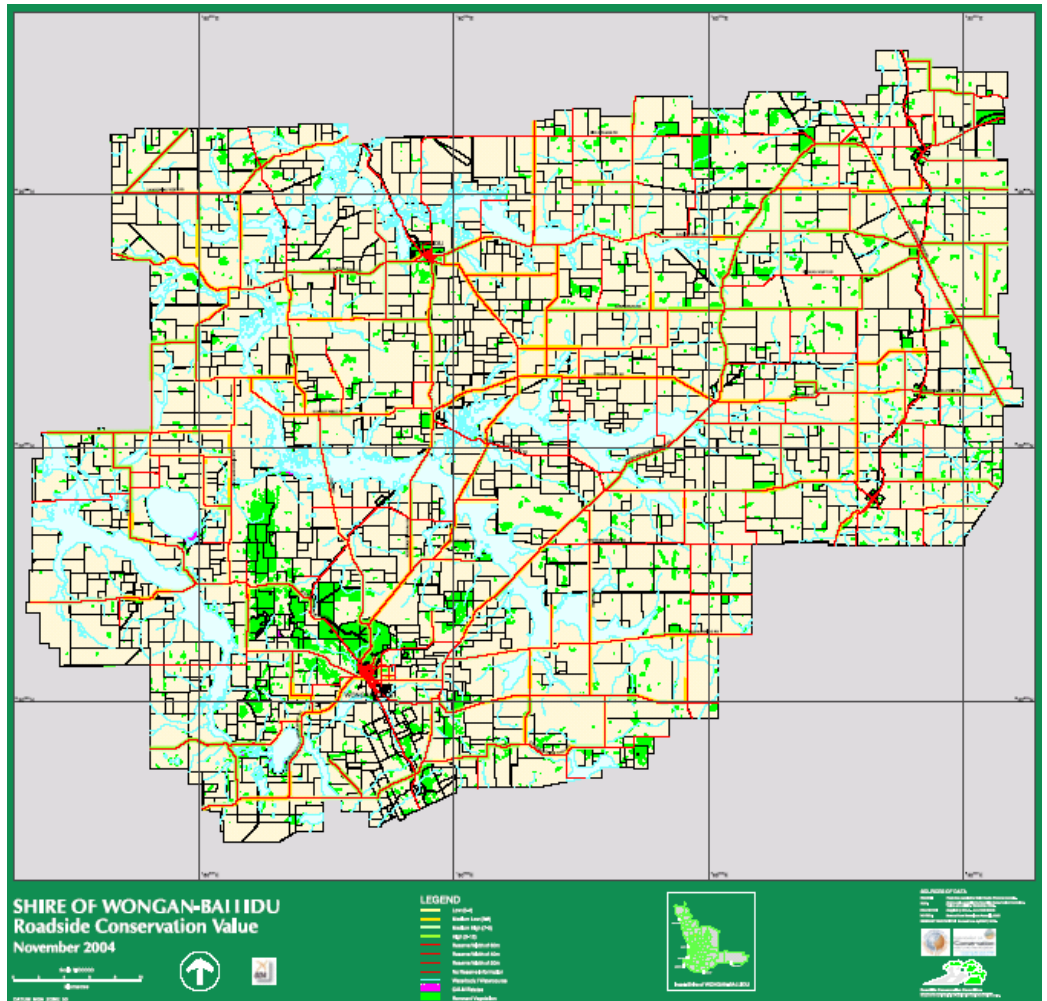
## 2.0 USING THE RCV MAP

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

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

The map can also be used as a reference to overlay transparencies of other information relevant to roadside conservation. This enables the roadside vegetation to be assessed in the context of its importance to the shire's overall conservation network. Other overlays, such as the degree of weed infestation, or the location of environmentally

sensitive areas or future planned developments, could also be produced as an aid to roadside management.



The RCV map depicts roadside conservation values in the Shire of Wongan-Ballidu.



As well as providing a road reserve planning and management tool, the roadside conservation value 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.
- 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 CALM

### 3.0 RESULTS

Using the information collected by the roadside survey, totals of the 6 attributes used to calculate conservation values in the Shire of Wongan-Ballidu is presented in Table 3. The other attributes; width of road reserve and width of vegetated roadside are presented in Table 4. 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.

<b>Summary Information Shire of Wongan-Ballidu</b>					
Length of roadsides surveyed: 1,961 km (980.5 km of road)					
<b><u>Conservation Status</u></b>			<b><u>Native Vegetation on Roadsides</u></b>		
	Total (km)	%		Total (km)	%
High (9-12)	526.9	26.9	2-3 vegetation layers	1302.0	66.4
Medium-high (7-8)	512.3	26.1	1 vegetation layer	371.1	18.9
Medium-low (5-6)	420.2	21.4	0 vegetation layers	288.0	14.7
Low (0-4)	501.7	25.6	Total	1961.0	100.0
Total	1961.0	100.0			
<b><u>Number of Different Native Species</u></b>			<b><u>Extent of Native Vegetation</u></b>		
	Total (km)	%		Total (km)	%
Over 20 species	293.3	15.0	Over 80%	255.4	13.0
6 to 19 species	630.6	32.2	20% to 80%	669.7	34.2
0 to 5 species	1037.1	52.9	Less than 20%	1035.9	52.8
Total	1961.0	100.0	Total	1961.0	100.0
<b><u>Predominant Adjoining Land use</u></b>			<b><u>Value as a Biological Corridor</u></b>		
	Total (km)	%		Total (km)	%
Agricultural: completely cleared	1732.9	88.4	High	620.1	31.6
Agricultural: scattered vegetation	19.3	1.0	Medium	745.6	38.0
Uncleared native vegetation	131.5	6.7	Low	595.3	30.4
Drain	0.0	0.0	Total	1961.0	100.0
Plantation of non-natives	0.0	0.0			
Railway	0.0	0.0			
Urban or Industrial	50.7	2.6			
Other	26.7	1.4			
Total	1961.0	100.0			
			<b><u>Weed Infestation</u></b>		
				Total (km)	%
			Light	722.3	36.8
			Medium	539.2	27.5
			Heavy	699.5	35.7
			Total	1961.0	100.0
Roadside surveys were carried out in Wongan-Ballidu Shire throughout August and September 2004					

**Table 3: Summary of results from the roadside survey in the Shire of Wongan-Ballidu.**

<b>Width of Road Reserve</b>			<b>Width of Vegetated Roadside</b>		
	Total (km)	%		Total (km)	%
20m	881.5	89.9	1 to 5 m	1680.3	85.7
40m	76.2	7.8	5 to 20 m	159.2	8.1
100m	22.8	2.3	over 20 m	17.0	0.9
Total	980.5	100.0	Unknown	104.6	5.3
			Total	1961.0	100.0

**Table 4: Width of road reserves and width of vegetation on roadsides in the Shire of Wongan-Ballidu.**

#### Width of Road Reserve

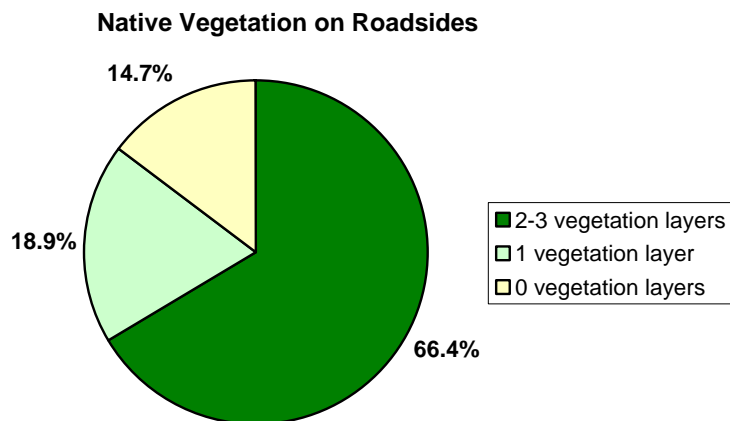
The widths of road reserves in the Shire of Wongan-Ballidu were recorded throughout the roadside survey in increments of 20 metres. The majority of road reserves were 20 metres in width, with 881.5 km, or 89.9% of roads falling into this category. Of the remaining roads, 76.2 km, or 7.8% were 40 metres in width, and 22.8 km, or 2.3% were 100m wide.

#### Width of Vegetated Road Reserve

The width of vegetated roadside was recorded by selecting one of three categories, 1 to 5 metres, 5 to 20 metres or over 20 metres in width. The left and right hand sides were recorded independently, and then combined to provide the total figures shown in Table 4. The majority, 85.7%, of roadsides contained vegetation between 1 to 5 metres in width, followed by 8.1% of roadsides where the vegetation fell between 5 to 20 metres in width. Roadside vegetation over 20 metres in width spanned only 0.9% of the roadsides surveyed, whilst no data was recorded for 5.3% of the roadsides surveyed.

#### Native Vegetation in Roadsides

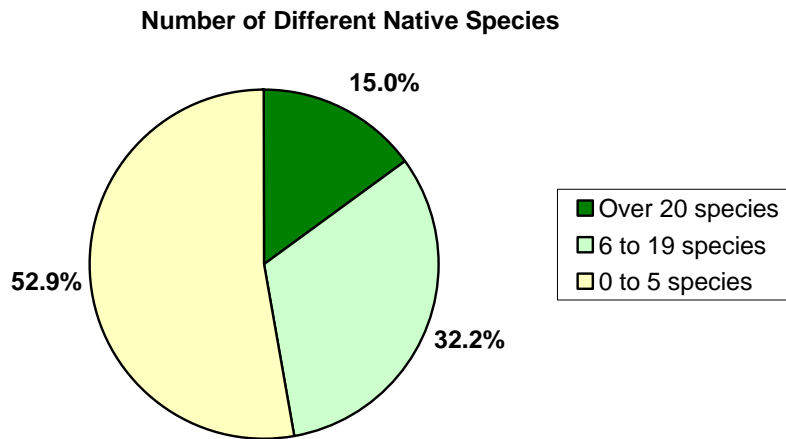
The number of native vegetation layers present, either the tree, shrub or ground layers determined the 'native vegetation on roadside' value. Sections with two to three layers of native vegetation covered 66.4% of roadsides (1,302 km), 18.9% had only one layer (371.1 km) and 14.7% had no layers of native vegetation (288 km), refer to Figure 1.



**Figure 1– Native vegetation on roadsides in the Shire of Wongan-Ballidu.**

### Number of Native Plant Species

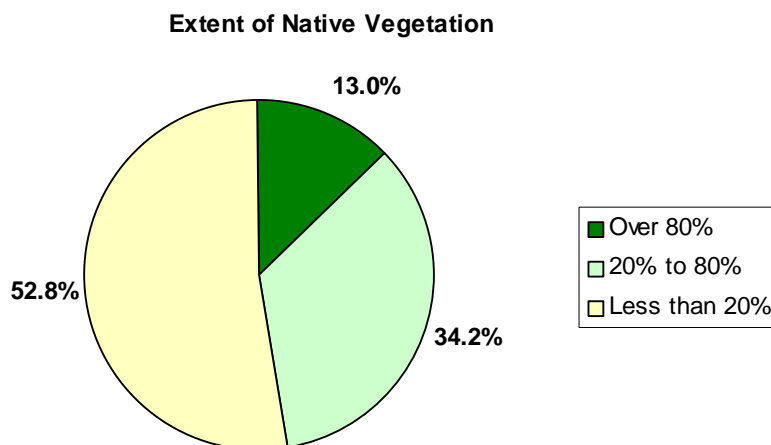
The 'number of native plant species' score provided a measure of the diversity of the roadside vegetation. Survey sections with more than 20 plant species spanned 15.0% (293.3 km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 32.2% (630.6 km) of the roadside. The remaining 52.9% (1037.1 km) contained less than 5 plant species, refer to Figure 2.



**Figure 2 – Number of Different Native Species in roadsides in the Shire of Wongan-Ballidu**

### Extent of Native Vegetation

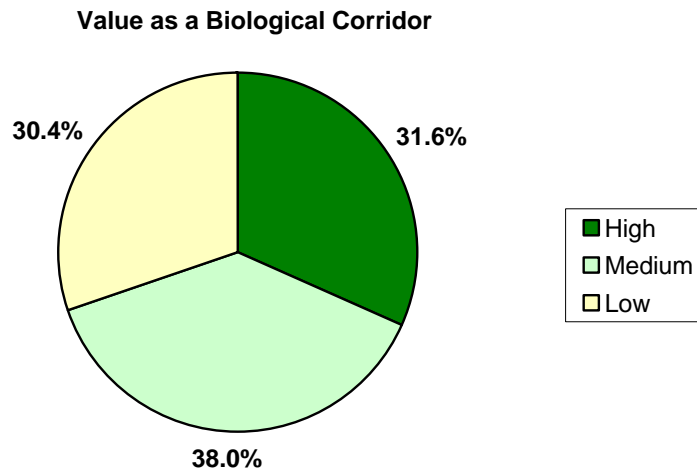
The 'extent of native vegetation' cover refers to the continuity of the roadside vegetation and takes into account the presence of disturbances such as weeds. Roadsides with extensive vegetation cover, i.e. greater than 80%, occurred along 13.0% of the roadsides surveyed (255.4 km). Survey sections with 20% to 80% vegetation cover accounted for 34.2% of the roadsides (669.7 km). The remaining 52.8% had less than 20% native vegetation (1035.9 km), and therefore, a low 'extent of native vegetation' value, refer to Figure 3.



**Figure 3 – Extent of Native Vegetation in roadsides in the Shire of Wongan-Ballidu.**

### Value as a Biological Corridor

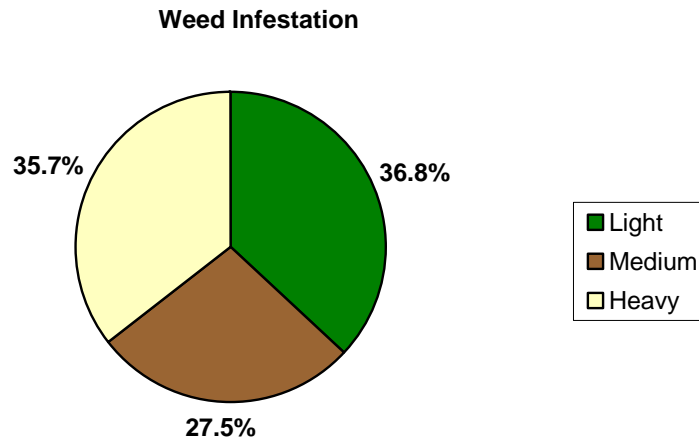
The 'value as a biological corridor' attribute considers four characteristics- connection to uncleared areas; presence of flowering shrubs; large trees with hollows and hollow logs. Roadsides determined to have high value as biological corridors were present along 31.6% (620.1 km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 38.0% (745.6 km), and roadsides with low value as a biological corridor occurred along 30.4% (595.3 km) of the roadsides surveyed, refer to Figure 4.



**Figure 4 – Value as a biological corridor.**

### Weed Infestation.

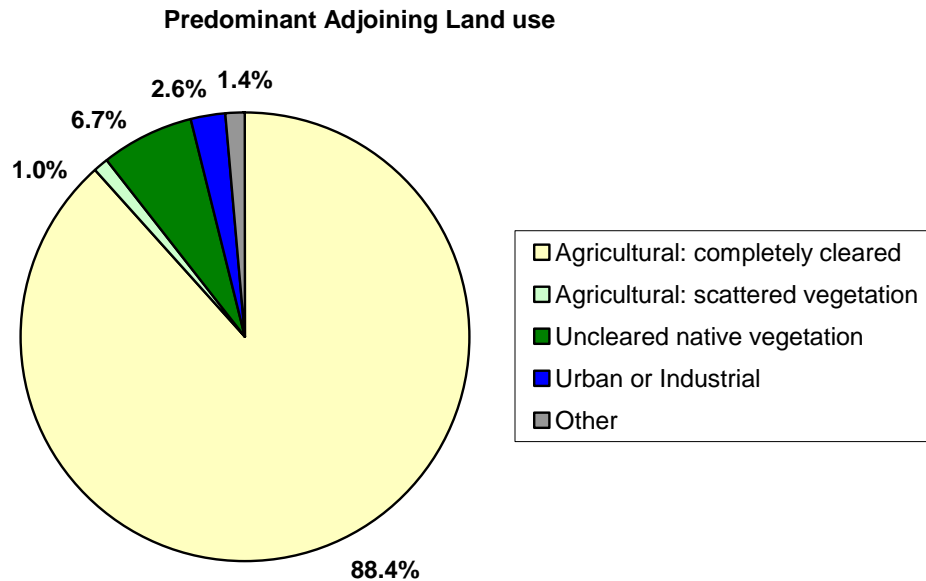
Light levels of weed infestation (weeds less than 20% of total plants), were recorded on 36.8% (722.3 km) of the roadsides surveyed, medium level weed infestation (weeds 20-80% of the total plants) occurred on 27.5% (539.2 km) of the roadsides and 35.7% of roadsides (699.5 km) were heavily infested with weeds (weeds more than 80% of the total plants), refer to Figure 5.



**Figure 5 – Weed infestation.**

### Predominant Adjoining Land Use

Uncleared native vegetation was present on 6.7% (131.5 km) of the land adjoining roadsides, whilst 88.4% (1,732.9 km) of roadsides adjoined land that had been completely cleared for agriculture. 1.0% (19.3 km) of the roadsides bordered land cleared for agriculture, but containing a scattered distribution of native vegetation. Urban or industrial were the predominant adjoining land use for 2.6% (50.7 km) of the roadsides surveyed and 'other' land uses adjoined 1.4% (26.7 km) of the roadsides surveyed, see Figure 6.



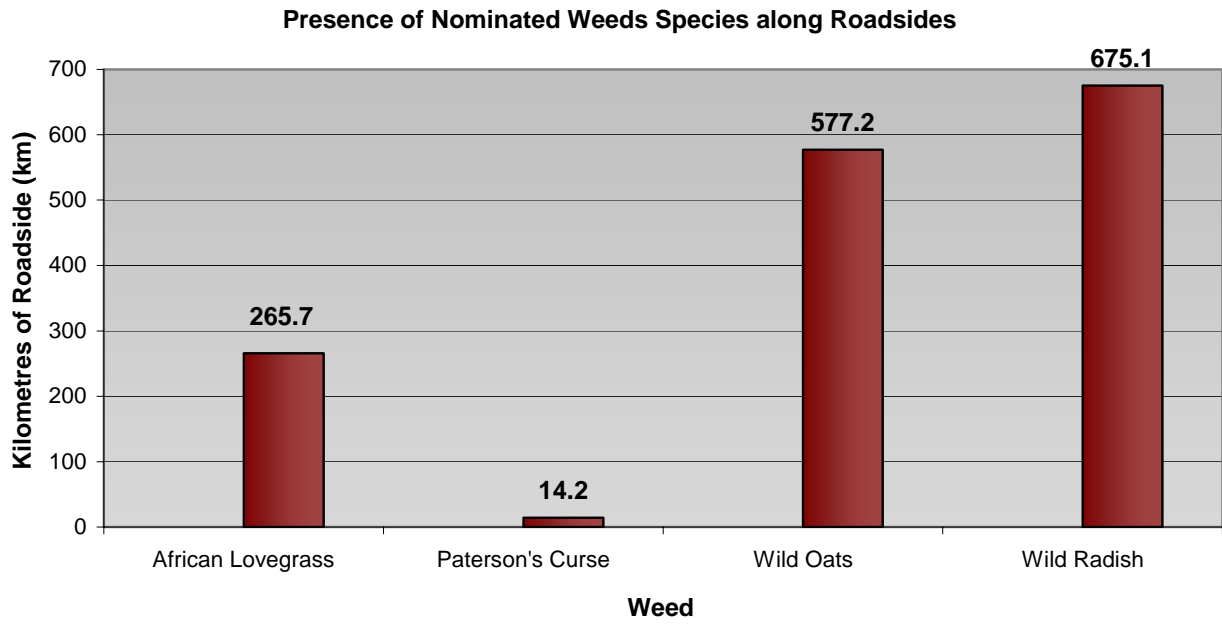
**Figure 6 – Predominant adjoining land use.**

### Nominated Weeds

The following weeds/ weed groups are depicted on clear overlays accompanying the 2004 RCV map:

- Paterson's Curse (*Echium plantagineum*);
- African Lovegrass (*Eragrostis curvula*);
- Wild Oats (*Avena fatua*); and
- Wild Radish (*Raphanus raphanistrum*).

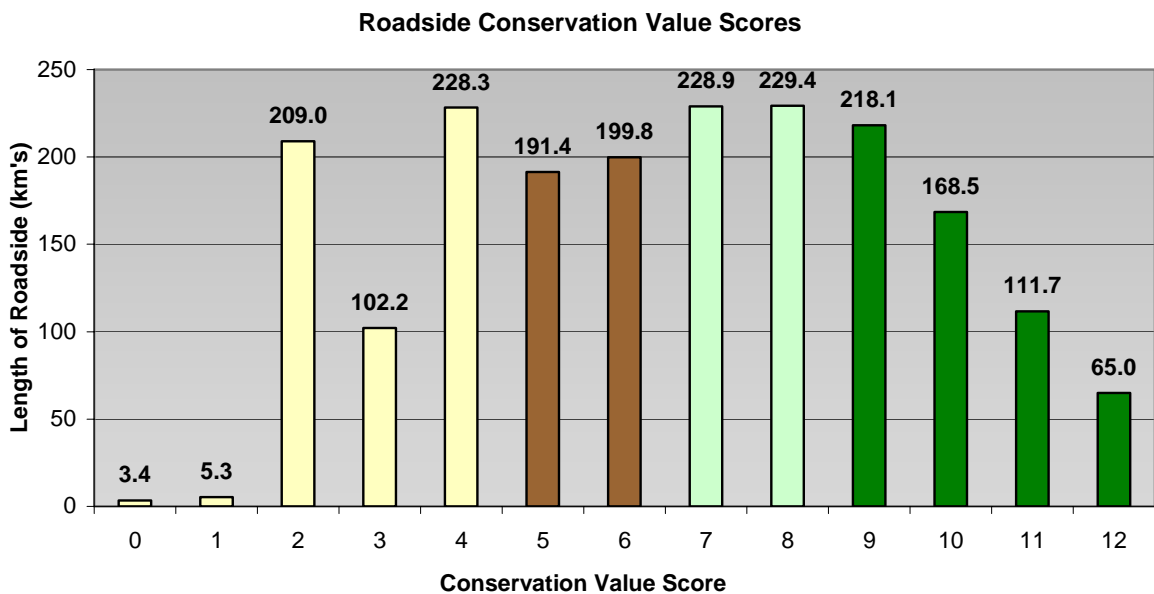
Of the 4 nominated weeds species, the Wild Radish was the most prevalent, and was recorded along 675.1 km (or 34.4%) of roadsides surveyed. Wild oats were almost as prevalent, recorded along 577.2 km (or 29.4%) of roadsides. African Lovegrass was the next most commonly recorded weed, occurring along 265.7 km (or 13.5%) of roadsides. Paterson's Curse was recorded along 14.2 km (or 0.7%). Refer to Figure 7.



**Figure 7 – Presence of nominated weed species along roadsides in the Shire of Wongan-Ballidu.**

Conservation Value Scores

Conservation value scores were calculated for each section of roadside surveyed. Scores ranged from 0 to 12, from lowest to highest conservation value respectively, these are shown in Figure 8. The most occurring roadside conservation values were 8, 7 and 4, with 229.4 km, 228.9 km and 228.3 km respectively. A score of 9 was the next most frequent score with 218.1 km of roadside, followed by 2 with 209.0 km, then 6 with 199.8 km and then the score of 5 with 191.4 km. Roadside conservation value score of 10 covered 168.5 km of roadsides, a score of 11 covered 111.7 km, and a score of 3 spanned 102.2 km. 65.0 km of roadsides scored 12, 5.3 km of roadsides scored 1 and 3.4 km of roadside scored 0.

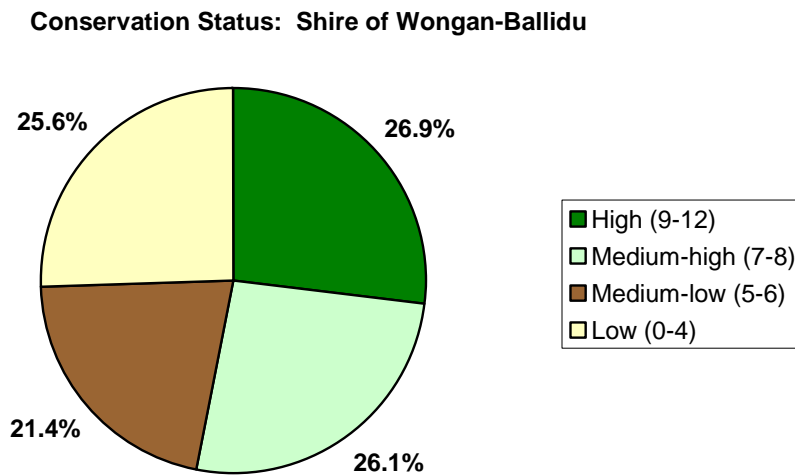


**Figure 8- Roadside conservation value scores of all roadsides surveyed in the Shire of Wongan-Ballidu.**



## Conservation Status

The conservation status category indicated the conservation value of roadsides surveyed in the Shire of Wongan-Ballidu. Roadside sections of high conservation value covered 26.9% (526.9 km) of the length of roadsides surveyed. Medium-high conservation value roadsides accounted for 26.1% of the total surveyed (512.3 km), medium-low conservation roadside covered 21.4% (420.2 km) of the total surveyed. Roadsides of low conservation value occupied 25.6% (501.7 km) of the roadsides surveyed, refer to Figure 9.



**Figure 9– Conservation status of roadsides in the Shire of Wongan-Ballidu.**

## 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*, refer to Appendix 7.

Although presently there are no Flora Roads designated within the Shire of Wongan-Ballidu, the roadside survey and the roadside conservation value (RCV) map highlighted a number of roadsides that have the potential to be declared as Flora Roads. The roads determined as having high conservation value sections of roadside in the Shire of Wongan-Ballidu include:

- Ballidu- Bindi Bindi Road
- Beilby Road
- Brennan Road
- Bunketch-Kulja Road
- Corbett Road
- Degrussas Road
- Dowerin-Kalannie Road
- Gabalong East Road
- Kirwan East Road
- Kirwan Road
- Kirwan West Road
- Kokardine East Road
- Lloyd Road
- Rabbit Proof Fence Road
- Smith Road
- Strahan Road
- Tascosa Road
- Tootra Fence Road
- Vincent Road
- Wells Road
- Wongan Hills-Burakin Road
- Yerecoin South East 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, the following management procedures are recommended. The following section provides general management recommendations that will assist in retaining and enhancing roadside conservation values.

The Executive Officer of the Roadside Conservation Committee is also available to provide assistance on all roadside conservation matters, and can be contacted on (08) 9334 0423. The following RCC publications provide guidelines and management recommendations that will assist Local Government Authorities:

- *RCC Roadside Manual*,
- *The Roadside Handbook*, and
- *Guidelines for Managing Special Environmental Areas in Transport Corridors*.

### 1.1 Management Recommendations

1. *Protect high conservation value roadsides by maintaining and enhancing the native plant communities.*

This can be achieved by:

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

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,
- incorporating into tourist, wildflower and/or scenic drives.

3. *Improve roadside sections of medium to low conservation value by:*

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

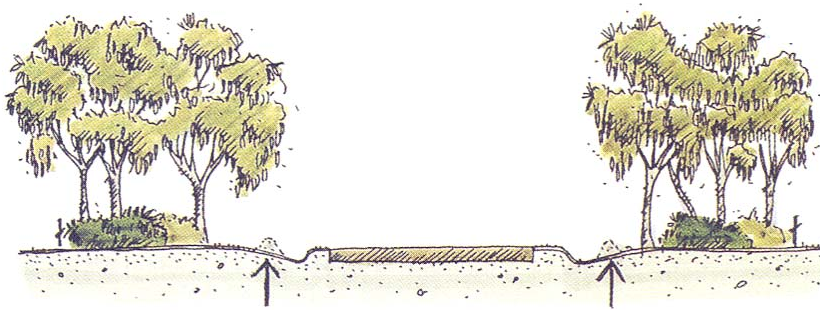


**On-site inspections, consultation and cooperation with stakeholders, such as adjoining land owners; the RCC and Landcare can result in better environmental, social and economic outcomes overall.**

## 1.2 Minimising Disturbance

Minimal disturbance can be achieved by:

- 1.2.1 Adopting a road design that occupies the minimum space;
- 1.2.2 Diverting the line of a table drain to avoid disturbing valuable flora;
- 1.2.3 Pruning branches, rather than removing the whole tree or shrub;
- 1.2.4 Not dumping spoil on areas of native flora;
- 1.2.5 Apply the Fire Threat Assessment (RCC Roadside Manual) before burning roadside vegetation, use methods other than fuel reduction burns to reduce fire threat; if roadside burning must be undertaken, incorporate it into a district fire management program;
- 1.2.6 Encourage adjacent landholders to set back fences to allow roadside vegetation to proliferate;
- 1.2.7 Encourage adjacent landholders to plant windbreaks or farm tree lots adjacent to roadside vegetation to create a denser windbreak or shelterbelt;
- 1.2.8 Encourage revegetation projects by adjacent landholders.

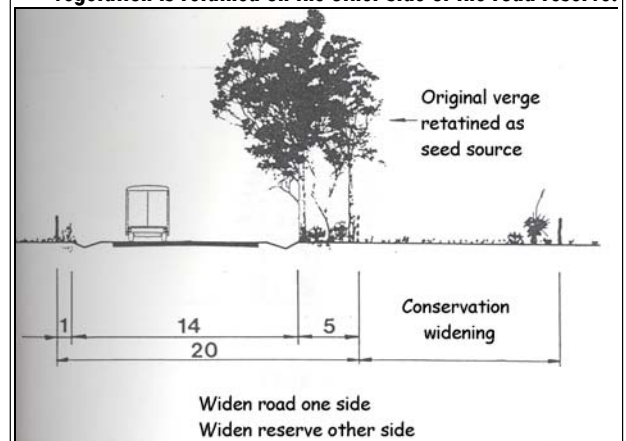


Avoid windrowing drain material into vegetation



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 road reserve.

Figure 10- (below): Widening a road to one side only. Roadside vegetation is retained on the other side of the road reserve.



## 2.0 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;
- 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.

## 3.0 Setting Objectives

The objective of all roadside management should be to:

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

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# Appendix

## 1



<b>SURVEY TO DETERMINE THE CONSERVATION VALUE OF ROADSIDES IN THE SHIRE OF _____</b>	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 _____	<b><u>No. OF DIFFERENT NATIVE SPECIES</u></b> 0 – 5 <input type="checkbox"/> <input type="checkbox"/> 6 – 19 <input type="checkbox"/> <input type="checkbox"/> Over 20 <input type="checkbox"/> <input type="checkbox"/>  <b><u>FAUNA OBSERVED</u></b> <hr/> <b><u>VALUE AS A BIOLOGICAL CORRIDOR</u></b> 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"/>  <b><u>PREDOMINANT ADJOINING LANDUSE</u></b> 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: _____	<b><u>NOMINATED WEEDS</u></b> <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"/>
<b><u>WIDTH OF ROAD RESERVE (m)</u></b> _____ Side of the road           Left       Right  <b><u>WIDTH OF VEGETATED ROADSIDE</u></b> 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"/>	 <b><u>UTILITIES / DISTURBANCES</u></b> 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: _____	 <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"/>
<b><u>NATIVE VEGETATION ON ROADSIDE</u></b> Tree layer <input type="checkbox"/> <input type="checkbox"/> Shrub layer <input type="checkbox"/> <input type="checkbox"/> Ground layer <input type="checkbox"/> <input type="checkbox"/>	 <b><u>GENERAL WEEDS</u></b> 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"/>	<b><u>GENERAL COMMENTS</u></b> <hr/> <hr/> <b><u>OFFICE USE ONLY</u></b> Conservation value score <input type="checkbox"/> <input type="checkbox"/>
<b><u>EXTENT OF NATIVE VEGETATION ON ROADSIDE</u></b> 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"/>		

A survey of the roadside conservation values in the Shire of Wongan-Ballidu

# Appendix

## 2

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180003	1	0	1.1	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	1	1	1	2	1	1	1	2	2	2	8	10	WILD_RADISH WILD_OATS
5180003	2	1.1	3.2	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	1	1	2	2	1	1	2	2	2	2	10	10	WILD_RADISH WILD_OATS
5180003	3	3.2	5	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	WILD_RADISH WILD_OATS
5180003	4	5	11.3	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	0	0	1	1	0	0	2	2	2	2	7	7	WILD_OATS
5180003	5	11.3	15.3	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	0	0	1	1	0	0	2	2	2	2	7	7	WILD_OATS
5180003	6	15.3	17.1	BALLIDU EAST RD	03-Aug-04	paul bron	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	
5180003	7	17.1	18.7	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	1	1	2	2	1	1	1	1	2	2	8	9	WILD_RADISH WILD_OATS
5180003	8	18.7	23.1	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	0	0	1	1	1	1	2	2	2	2	8	8	WILD_OATS WILD_RADISH
5180003	9	23.1	24.1	BALLIDU EAST RD	03-Aug-04	paul bron	20	1	1	0	0	1	1	0	0	1	1	2	2	5	5	WILD_RADISH WILD_OATS
5180003	10	24.1	25.7	BALLIDU EAST RD	03-Aug-04	paul bron	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9	WILD_OATS WILD_RADISH
5180004	1	0	1	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	2	2	0	0	1	1	2	1	0	0	7	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180004	2	1	5.3	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180004	3	5.3	6.4	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	2	2	2	2	2	2	2	2	2	2	12	12	WILD_RADISH
5180004	4	6.4	10	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	2	2	2	2	2	2	2	2	2	2	12	12	WILD_RADISH
5180004	5	10	11.6	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	1	1	1	1	0	2	2	2	2	2	8	10	WILD_RADISH AFRICAN_LOVEGRASS
5180004	6	11.6	15.2	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	0	0	1	1	1	1	1	1	2	2	7	7	WILD_RADISH AFRICAN_LOVEGRASS
5180004	7	15.2	21.2	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	0	0	1	1	0	0	2	2	1	1	6	6	WILD_RADISH AFRICAN_LOVEGRASS
5180004	8	21.2	23.2	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	0	0	0	0	2	2	2	1	1	1	7	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180004	9	23.2	24	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	0	2	0	2	2	2	2	2	2	2	8	10	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180004	10	24	26.64	BALLIDU-BINDI BINDI RD	05-Aug-04	shaune	40	2	2	1	1	2	2	2	2	2	2	2	2	11	11	WILD_RADISH WILD_OATS
5180006	1	0	5.6	MANMANNING RD	03-Aug-04	kathy sadler	20	1	1	0	0	0	0	1	1	0	0	2	2	3	4	AFRICAN_LOVEGRASS WILD_RADISH
5180006	2	5.6	10.4	MANMANNING RD	03-Aug-04	kathy sadler	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	WILD_OATS AFRICAN_LOVEGRASS
5180006	3	10.4	23.8	MANMANNING RD	03-Aug-04	kathy sadler	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180006	4	23.8	27.3	MANMANNING RD	03-Aug-04	kathy sadler	20	2	2	2	0	2	0	2	2	2	0	2	2	10	6	WILD_OATS
5180006	5	27.3	31.6	MANMANNING RD	03-Aug-04	kathy sadler	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH
5180007	1	1	3.8	MOONIJIN WEST RD	31-Aug-04	shari	20	2	2	2	1	2	1	1	1	2	1	2	2	11	8	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS

A survey of the roadside conservation values in the Shire of Wangan-Ballidu

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180007	2	3.8	5.2	MOONIJIN WEST RD	31-Aug-04	shari	20	1	0	0	0	0	0	1	2	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS
5180007	3	5.2	6.2	MOONIJIN WEST RD	31-Aug-04	shari	20	0	2	0	0	0	0	2	2	0	0	2	2	4	6	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS
5180007	4	6.2	9.2	MOONIJIN WEST RD	31-Aug-04	shari	20	0	1	0	0	0	0	2	0	1	2	2	2	6	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180007	5	9.2	11.3	MOONIJIN WEST RD	31-Aug-04	shari	20	1	1	0	0	0	1	1	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180007	6	11.3	12.1	MOONIJIN WEST RD	31-Aug-04	shari	20	1	0	0	0	0	0	0	0	0	2	2	3	2	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180007	7	12.1	16.9	MOONIJIN WEST RD	31-Aug-04	shari	20	2	2	0	0	0	2	2	1	1	2	2	7	7	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180007	8	16.9	17.6	MOONIJIN WEST RD	31-Aug-04	shari	20	2	2	2	2	2	2	2	2	2	2	2	12	12	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180007	9	17.6	19.5	MOONIJIN WEST RD	31-Aug-04	shari	20	1	1	0	0	0	1	1	1	0	2	2	5	4	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180007	10	19.5	20	MOONIJIN WEST RD	31-Aug-04	shari	20	2	2	1	1	1	0	1	2	1	1	2	2	8	8	AFRICAN_LOVEGRASS WILD_RADISH
5180007	11	20	20.4	MOONIJIN WEST RD	31-Aug-04	shari	20	0	0	0	0	0	1	1	0	0	2	2	3	3	AFRICAN_LOVEGRASS WILD_RADISH	
5180007	12	20.4	21.3	MOONIJIN WEST RD	31-Aug-04	shari	20	2	2	0	0	0	2	2	2	1	2	2	8	7	AFRICAN_LOVEGRASS WILD_RADISH	
5180008	1	0	3.7	YERECOIN SOUTH EAST RD	11-Aug-04	shari	20	1	1	0	0	0	0	0	0	0	2	2	3	3	WILD_OATS	
5180008	2	3.7	9.9	YERECOIN SOUTH EAST RD	11-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_OATS
5180008	3	9.9	13.5	YERECOIN SOUTH EAST RD	11-Aug-04	shari	20	2	2	0	2	0	1	1	1	2	2	2	7	10	WILD_OATS	
5180009	1	0	0.8	KONDUT EAST RD	03-Aug-04	Corey T	20	2	2	1	1	0	0	2	2	2	2	1	1	8	8	AFRICAN_LOVEGRASS WILD_OATS WILD_RADISH
5180009	2	0.8	8.8	KONDUT EAST RD	03-Aug-04	Corey T	20	2	2	0	0	0	0	1	1	0	1	2	2	5	6	WILD_OATS WILD_RADISH
5180009	3	8.8	23.2	KONDUT EAST RD	03-Aug-04	Corey T	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	WILD_OATS WILD_RADISH
5180010	1	0	0.8	KONDUT WEST RD	05-Aug-04	shaune	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH AFRICAN_LOVEGRASS
5180010	2	0.8	1.6	KONDUT WEST RD	05-Aug-04	shaune	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH AFRICAN_LOVEGRASS
5180010	3	1.6	2.4	KONDUT WEST RD	05-Aug-04	shaune	20	2	0	1	0	0	0	0	2	0	2	2	7	2	WILD_RADISH	
5180010	4	2.4	3.4	KONDUT WEST RD	05-Aug-04	shaune	20	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH	
5180010	5	3.4	3.8	KONDUT WEST RD	05-Aug-04	shaune	20	1	1	0	0	0	0	0	2	2	2	2	5	5	WILD_RADISH	
5180010	6	3.8	5.3	KONDUT WEST RD	05-Aug-04	shaune	20	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH AFRICAN_LOVEGRASS	

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180010	7	5.3	6.4	KONDUT WEST RD	05-Aug-04	shaune	20	2	2	0	0	1	1	0	0	2	1	2	2	7	6	WILD_RADISH AFRICAN_LOVEGRASS
5180010	8	6.4	7.2	KONDUT WEST RD	05-Aug-04	shaune	20	2	2	0	0	1	1	2	2	2	2	2	2	9	9	WILD_RADISH
5180010	9	7.2	8.1	KONDUT WEST RD	05-Aug-04	shaune	20	2	2	1	1	1	2	2	2	2	2	2	2	10	11	WILD_RADISH
5180010	10	8.1	9	KONDUT WEST RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	2	1	2	2	6	5	WILD_RADISH WILD_OATS
5180010	11	9	11.8	KONDUT WEST RD	05-Aug-04	shaune	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	WILD_RADISH WILD_OATS
5180010	12	11.8	14.9	KONDUT WEST RD	05-Aug-04	shaune	20	1	1	0	0	0	0	2	2	0	0	1	1	4	4	WILD_OATS
5180010	13	14.9	16.4	KONDUT WEST RD	05-Aug-04	shaune	20	1	1	0	0	0	0	2	2	1	1	1	1	5	5	WILD_OATS WILD_RADISH
5180010	14	16.4	20.7	KONDUT WEST RD	05-Aug-04	shaune	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_OATS WILD_RADISH
5180010	15	20.7	22	KONDUT WEST RD	05-Aug-04	shaune	20	2	2	1	1	1	1	1	1	2	2	2	0	9	7	WILD_OATS WILD_RADISH
5180010	16	22	23.4	KONDUT WEST RD	05-Aug-04	shaune	20	2	2	1	2	1	2	0	2	2	2	2	0	8	10	WILD_OATS WILD_RADISH
5180011	1	0	0.8	KALGUDDERING EAST RD	31-Aug-04	shari	20	2	2	1	1	1	1	2	2	2	2	2	2	10	10	WILD_RADISH WILD_OATS
5180011	2	0.8	1.8	KALGUDDERING EAST RD	31-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	WILD_RADISH WILD_OATS
5180011	3	1.8	3.7	KALGUDDERING EAST RD	31-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180011	4	3.7	5.7	KALGUDDERING EAST RD	31-Aug-04	shari	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	WILD_RADISH WILD_OATS
5180011	5	5.7	9.8	KALGUDDERING EAST RD	31-Aug-04	shari	20	2	2	1	2	2	2	2	2	2	2	2	2	11	12	WILD_RADISH WILD_OATS
5180011	6	9.8	11	KALGUDDERING EAST RD	31-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180011	7	11	12	KALGUDDERING EAST RD	31-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	WILD_RADISH WILD_OATS
5180011	8	12	13.6	KALGUDDERING EAST RD	31-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180011	9	13.6	14.7	KALGUDDERING EAST RD	31-Aug-04	shari	20	1	2	0	1	0	1	1	1	1	1	2	2	5	8	WILD_RADISH WILD_OATS
5180011	10	14.7	17	KALGUDDERING EAST RD	31-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	WILD_RADISH WILD_OATS
5180014	1	0	3.5	KALGUDDERING WEST RD	31-Aug-04	shari	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	
5180014	2	3.5	6.5	KALGUDDERING WEST RD	31-Aug-04	shari	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	
5180014	3	6.5	7.9	KALGUDDERING WEST RD	31-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180014	4	7.9	10.5	KALGUDDER WEST RD	31-Aug-04	shari	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_RADISH WILD_OATS
5180016	1	0	2.2	CADOUX NORTH RD	03-Aug-04	k8y	20	2	2	0	0	0	0	0	0	1	2	2	2	5	6	
5180016	2	2.2	4.6	CADOUX NORTH RD	03-Aug-04	k8y	20	2	2	0	0	0	0	1	1	1	1	2	2	6	6	AFRICAN_LOVEGRASS WILD_RADISH
5180016	3	4.6	7.1	CADOUX NORTH RD	03-Aug-04	k8y	20	2	2	1	1	0	0	0	0	1	2	2	2	6	7	AFRICAN_LOVEGRASS WILD_RADISH
5180016	4	7.1	9.3	CADOUX NORTH RD	03-Aug-04	k8y	20	2	2	0	0	0	0	2	2	2	2	2	2	8	8	AFRICAN_LOVEGRASS WILD_RADISH
5180017	1	0	0.5	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	2	1	1	1	1	2	2	2	2	2	2	10	10	
5180017	2	0.5	1.7	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	2	0	0	0	0	2	2	1	1	2	2	7	7	
5180017	3	1.7	2.7	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	2	0	0	0	0	2	2	0	0	2	2	6	6	
5180017	4	2.7	3.9	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	2	1	0	1	0	2	2	2	0	2	2	10	6	
5180017	5	3.9	4.3	KOKARDINE WEST RD	03-Aug-04	k8y	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	
5180017	6	4.3	4.9	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	1	0	0	0	0	2	2	1	0	2	2	7	5	WILD_RADISH
5180017	7	4.9	7.1	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	2	0	0	1	1	2	2	1	1	2	2	8	8	WILD_RADISH
5180017	8	7.1	10.1	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	2	0	0	1	1	2	2	1	1	2	2	8	8	
5180017	9	10.1	16.39	KOKARDINE WEST RD	03-Aug-04	k8y	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	
5180018	1	0	3.3	KOKARDINE EAST RD	08-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	AFRICAN_LOVEGRASS
5180018	2	3.3	6.1	KOKARDINE EAST RD	08-Aug-04	shari	20	2	2	1	1	1	1	2	1	1	1	2	2	8	9	
5180019	1	0	0.45	WHITE WELL RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180019	2	0.45	3.95	WHITE WELL RD	05-Aug-04	shaune	20	2	2	0	0	0	0	1	1	1	1	2	2	6	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180019	3	3.95	4.85	WHITE WELL RD	05-Aug-04	shaune	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_OATS
5180019	4	4.85	6.15	WHITE WELL RD	05-Aug-04	shaune	20	2	2	2	1	2	2	2	2	2	1	0	2	10	10	WILD_OATS
5180019	5	6.15	7.65	WHITE WELL RD	05-Aug-04	shaune	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_RADISH PATERSONS_CURSE WILD_OATS
5180019	6	7.65	8.75	WHITE WELL RD	05-Aug-04	shaune	20	1	1	0	0	0	0	2	1	0	0	2	2	5	4	WILD_RADISH
5180019	7	8.75	8.85	WHITE WELL RD	05-Aug-04	shaune	20	2	2	2	2	2	2	2	2	2	2	2	2	12	12	PATERSONS_CURSE WILD_RADISH WILD_OATS
5180019	8	8.85	9.55	WHITE WELL RD	05-Aug-04	shaune	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	PATERSONS_CURSE WILD_RADISH WILD_OATS
5180019	9	9.55	11.15	WHITE WELL RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	1	2	2	2	5	6	PATERSONS_CURSE WILD_RADISH WILD_OATS



ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present	
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
5180021	1	0	2.9	DAMBORING WEST RD	05-Aug-04	shaune	20	1	2	0	2	0	2	2	1	2	2	2	2	2	6	4	WILD_RADISH WILD_OATS
5180021	2	2.9	4	DAMBORING WEST RD	05-Aug-04	shaune	20	2	2	1	2	1	2	0	2	1	2	0	2	5	12	WILD_RADISH WILD_OATS	
5180021	3	4	4.8	DAMBORING WEST RD	05-Aug-04	shaune	20	1	2	0	0	0	0	0	0	0	0	2	1	3	3	WILD_RADISH WILD_OATS	
5180021	4	4.8	5.3	DAMBORING WEST RD	05-Aug-04	shaune	20	2	1	1	0	0	0	0	0	0	0	2	2	5	3	WILD_RADISH WILD_OATS	
5180021	5	5.3	6.3	DAMBORING WEST RD	05-Aug-04	shaune	20	1	1	0	0	1	1	0	0	0	0	2	2	4	4	WILD_RADISH WILD_OATS	
5180021	6	6.3	8.2	DAMBORING WEST RD	05-Aug-04	shaune	20	2	2	1	1	2	2	1	1	2	1	2	2	10	9	WILD_RADISH WILD_OATS	
5180021	7	8.2	9.2	DAMBORING WEST RD	05-Aug-04	shaune	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_RADISH WILD_OATS	
5180021	8	9.2	9.8	DAMBORING WEST RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS	
5180021	9	9.8	11.3	DAMBORING WEST RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	0	0	0	0	2	2	WILD_RADISH WILD_OATS	
5180021	10	11.3	11.9	DAMBORING WEST RD	05-Aug-04	shaune	20	2	2	1	0	0	0	1	1	2	2	0	2	6	7	WILD_RADISH WILD_OATS	
5180021	11	11.9	17	DAMBORING WEST RD	05-Aug-04	shaune	20	2	1	0	0	0	0	0	0	2	0	2	2	6	3	WILD_RADISH WILD_OATS	
5180021	12	17	20.9	DAMBORING WEST RD	05-Aug-04	shaune	20	1	2	0	2	0	2	2	1	2	2	2	2	7	11	WILD_RADISH WILD_OATS	
5180022	1	0	2.8	KIRWAN RD	11-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180022	2	2.8	4.7	KIRWAN RD	11-Aug-04	shari	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8		
5180022	3	4.7	13.8	KIRWAN RD	11-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9		
5180023	1	0	4.9	KIRWAN WEST RD	11-Aug-04	shari	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	WILD_RADISH WILD_OATS	
5180024	1	0	6.8	KIRWAN EAST RD	29-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_RADISH WILD_OATS	
5180025	1	3.7	5.1	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	0	0	0	0	0	0	2	2	0	0	2	2	4	4	WILD_RADISH WILD_OATS	
5180025	2	5.1	7	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	WILD_RADISH WILD_OATS	
5180025	3	7	9.1	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	2	2	1	1	0	0	0	0	2	2	2	2	7	7	WILD_RADISH WILD_OATS	
5180025	4	9.1	10.2	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	WILD_RADISH WILD_OATS	
5180025	5	10.2	12.6	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	WILD_RADISH WILD_OATS	
5180025	6	12.6	15.7	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	WILD_RADISH WILD_OATS	
5180025	7	15.7	17.4	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	1	1	0	0	0	0	2	2	2	2	2	2	7	7	WILD_RADISH WILD_OATS	

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180025	8	17.4	27	RABBIT PROOF FENCE RD	29-Aug-04	shari	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	WILD_RADISH WILD_OATS
5180026	1	0	7.8	STOKES RD	03-Aug-04	Chris	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180026	2	7.8	15.02	STOKES RD	03-Aug-04	Chris	20	1	0	1	1	1	1	0	0	0	0	2	2	5	4	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180027	1	0	2.3	GABALONG EAST RD	12-Aug-04	shari	20	0	0	1	0	0	0	0	0	1	0	2	2	4	2	WILD_RADISH WILD_OATS
5180027	2	2.3	3	GABALONG EAST RD	12-Aug-04	shari	20	2	2	1	1	0	0	2	2	2	2	2	2	9	9	WILD_RADISH WILD_OATS
5180027	3	3	4.6	GABALONG EAST RD	12-Aug-04	shari	20	1	0	1	0	0	0	1	0	1	0	2	2	6	2	WILD_RADISH WILD_OATS
5180027	4	4.6	6.1	GABALONG EAST RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180027	5	6.1	11.6	GABALONG EAST RD	12-Aug-04	shari	20	2	2	2	2	2	2	1	1	2	2	2	2	11	11	WILD_RADISH WILD_OATS
5180027	6	11.6	14.65	GABALONG EAST RD	12-Aug-04	shari	20	1	1	2	2	1	1	2	2	1	1	2	2	9	9	WILD_RADISH WILD_OATS
5180028	1	0	8.1	WILDING RD	11-Aug-04	shari	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS
5180028	2	8.1	9.7	WILDING RD	11-Aug-04	shari	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_OATS
5180028	3	9.7	11.8	WILDING RD	11-Aug-04	shari	20	2	2	2	2	2	2	2	2	2	2	2	2	12	12	WILD_OATS
5180028	4	11.8	13.5	WILDING RD	11-Aug-04	shari	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	WILD_OATS
5180028	5	13.5	14.65	WILDING RD	11-Aug-04	shari	20	2	2	0	0	0	0	1	1	1	1	2	2	6	6	WILD_OATS
5180029	1	0	3.6	LAKE HINDS NORTH RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180029	2	3.6	5.4	LAKE HINDS NORTH RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	1	1	2	2	3	3	WILD_RADISH WILD_OATS
5180029	3	5.4	6.8	LAKE HINDS NORTH RD	12-Aug-04	shari	20	2	2	1	1	1	1	2	1	2	2	2	2	10	9	WILD_RADISH WILD_OATS
5180029	4	6.8	8.4	LAKE HINDS NORTH RD	12-Aug-04	shari	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_RADISH WILD_OATS
5180029	5	8.4	10	LAKE HINDS NORTH RD	12-Aug-04	shari	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH WILD_OATS
5180029	6	10	10.6	LAKE HINDS NORTH RD	12-Aug-04	shari	20	2	2	2	1	2	1	2	1	1	1	2	2	11	8	WILD_RADISH WILD_OATS
5180029	7	10.6	12.1	LAKE HINDS NORTH RD	12-Aug-04	shari	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	WILD_RADISH WILD_OATS
5180029	8	12.1	16.56	LAKE HINDS NORTH RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180030	1	0	1.9	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
5180030	2	1.9	3.4	OLD BALLIDU RD	03-Aug-04	Corey T	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	AFRICAN_LOVEGRASS WILD_OATS
5180030	3	3.4	6.3	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	2	1	1	0	0	0	0	1	1	2	2	6	6	AFRICAN_LOVEGRASS WILD_OATS WILD_RADISH
5180030	4	6.3	7.7	OLD BALLIDU RD	03-Aug-04	Corey T	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_OATS
5180030	5	7.7	9.7	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	2	1	1	0	0	1	1	0	0	1	1	5	5	WILD_OATS WILD_RADISH

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present	
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
5180030	6	9.7	11.9	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	2	0	1	0	2	1	2	0	2	1	1	0	4	9	WILD_OATS WILD_RADISH
5180030	7	11.9	16.8	OLD BALLIDU RD	03-Aug-04	Corey T	20	1	2	0	0	0	0	1	1	1	1	2	2	5	6	WILD_OATS	
5180030	8	16.8	18.63	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	2	1	0	1	0	1	1	0	0	2	2	7	5	WILD_OATS WILD_RADISH	
5180032	1	0	1	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	2	1	1	1	1	2	2	2	2	0	2	8	10	WILD_OATS WILD_RADISH	
5180032	2	1	7.1	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	2	0	0	0	0	1	1	1	0	2	2	6	5	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS	
5180032	3	7.1	12.4	OLD BALLIDU RD	03-Aug-04	Corey T	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	WILD_OATS WILD_RADISH	
5180033	1	0	1	CRAIG RD	12-Aug-04	shari	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10		
5180033	2	1	1.9	CRAIG RD	12-Aug-04	shari	20	2	2	2	1	2	1	2	1	2	2	0	0	10	7		
5180033	3	1.9	5.8	CRAIG RD	12-Aug-04	shari	20	1	1	2	2	1	1	2	2	1	1	0	0	7	7	WILD_OATS WILD_RADISH	
5180033	4	5.8	8.6	CRAIG RD	12-Aug-04	shari	20	1	1	0	0	0	0	0	0	1	1	0	0	2	2	WILD_OATS WILD_RADISH	
5180033	5	8.6	11.7	CRAIG RD	12-Aug-04	shari	20	0	1	0	0	0	0	0	0	0	1	0	0	0	2	WILD_OATS WILD_RADISH	
5180033	6	11.7	16	CRAIG RD	12-Aug-04	shari	20	1	1	0	0	0	0	2	2	2	2	2	2	7	7	WILD_OATS WILD_RADISH	
5180033	7	16	18	CRAIG RD	12-Aug-04	shari	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS WILD_RADISH	
5180036	1	0	1.7	KALGUDDERING NORTH RD	05-Aug-04	kathy sadler	20	1	1	0	0	1	1	1	1	2	2	2	2	7	7	AFRICAN_LOVEGRASS WILD_OATS	
5180036	2	1.7	3.8	KALGUDDERING NORTH RD	05-Aug-04	kathy sadler	20	2	2	0	0	1	1	0	0	2	2	0	2	5	7	AFRICAN_LOVEGRASS	
5180036	3	3.8	4.9	KALGUDDERING NORTH RD	05-Aug-04	kathy sadler	20	2	2	1	1	0	0	1	1	2	1	2	2	8	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS	
5180036	4	4.9	5.4	KALGUDDERING NORTH RD	05-Aug-04	kathy sadler	20	2	0	1	0	1	0	0	0	1	0	0	2	5	2	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS	
5180036	5	5.4	5.76	KALGUDDERING NORTH RD	05-Aug-04	kathy sadler	20	0	2	0	1	0	0	0	0	0	1	2	0	2	4		
5180037	1	0	7.2	LLOYD RD	05-Aug-04	shaune	20	2	2	1	1	2	2	2	2	2	2	2	2	11	11	WILD_RADISH WILD_RADISH AFRICAN_LOVEGRASS	
5180038	1	0	1.9	HOURIGAN RD	04-Aug-04	P Whyte	20	2	2	0	0	0	0	0	0	2	2	2	2	6	6	WILD_RADISH WILD_OATS	
5180038	2	1.9	3.5	HOURIGAN RD	04-Aug-04	P Whyte	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	WILD_RADISH WILD_OATS	
5180038	3	3.5	3.9	HOURIGAN RD	04-Aug-04	P Whyte	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS	
5180038	4	3.9	10.6	HOURIGAN RD	04-Aug-04	P Whyte	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	WILD_RADISH WILD_OATS	
5180040	1	0	0.3	QUAIN RD	04-Aug-04	P Whyte	20	2	2	0	0	0	0	0	0	0	0	1	1	3	3		
5180040	2	0.3	2.3	QUAIN RD	04-Aug-04	P Whyte	20	2	2	0	0	1	1	1	1	1	1	2	2	7	7		
5180040	3	2.3	4.7	QUAIN RD	04-Aug-04	P Whyte	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9		
5180040	4	4.7	5.6	QUAIN RD	04-Aug-04	P Whyte	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2		
5180040	5	5.6	6.2	QUAIN RD	04-Aug-04	P Whyte	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8		
5180040	6	6.2	6.9	QUAIN RD	04-Aug-04	P Whyte	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4		
5180040	7	6.9	7.5	QUAIN RD	04-Aug-04	P Whyte	20	2	0	1	0	1	0	1	0	1	0	2	2	8	2		
5180040	8	7.5	8.3	QUAIN RD	04-Aug-04	P Whyte	20	2	2	0	0	1	1	1	1	1	1	2	2	7	7		
5180040	9	8.3	8.7	QUAIN RD	04-Aug-04	P Whyte	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6		

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180040	10	8.7	9.3	QUAIN RD	04-Aug-04	P Whyte	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9	
5180040	11	9.3	9.8	QUAIN RD	04-Aug-04	P Whyte	20	2	0	1	0	1	0	1	0	1	0	2	2	8	2	
5180040	12	9.8	10.6	QUAIN RD	04-Aug-04	P Whyte	20	2	2	0	0	2	2	1	1	1	1	2	2	8	8	
5180042	1	0	3.7	BARROW RD	11-Aug-04	shari	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	
5180042	2	3.7	6.8	BARROW RD	11-Aug-04	shari	20	2	0	0	0	0	0	0	1	0	2	2	5	2		
5180042	3	6.8	12.5	BARROW RD	11-Aug-04	shari	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	
5180043	1	0	7.7	BUNKETCH-KULJA RD	11-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_RADISH WILD_OATS
5180044	1	0	10.8	BALLERMINA RD	03-Aug-04	C.T	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	WILD_RADISH WILD_OATS
5180046	1	0	0.9	MILLSTEED RD	02-Sep-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
5180046	2	0.9	1.7	MILLSTEED RD	02-Sep-04	shari	20	1	1	1	1	1	0	1	1	1	1	2	2	7	6	WILD_RADISH WILD_OATS
5180046	3	1.7	2.4	MILLSTEED RD	02-Sep-04	shari	20	0	1	0	0	0	0	0	1	1	2	2	3	4	WILD_RADISH WILD_OATS	
5180046	4	2.4	3.3	MILLSTEED RD	02-Sep-04	shari	20	2	2	1	1	0	0	2	2	1	1	2	2	8	8	WILD_RADISH WILD_OATS
5180047	1	0	13.9	DEGRUSSAS RD	03-Aug-04	Corey T	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
5180047	2	13.9	15.1	DEGRUSSAS RD	11-Aug-04	shari	20	2	2	0	1	1	2	1	2	1	1	2	2	7	10	WILD_OATS
5180047	3	15.1	24.8	DEGRUSSAS RD	11-Aug-04	shari	20	2	2	2	2	2	2	2	1	2	2	2	11	12	WILD_OATS	
5180047	4	24.8	25.4	DEGRUSSAS RD	11-Aug-04	shari	20	1	2	0	2	1	0	0	2	0	1	2	2	4	9	WILD_OATS
5180047	5	25.4	27.27	DEGRUSSAS RD	11-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_OATS
5180048	1	0	7.22	SILVER RD	03-Aug-04	C.T	20	2	2	1	1	0	0	1	1	0	0	2	2	6	6	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
5180049	1	7	9.1	PODMORE RD	29-Aug-04	shari	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	WILD_RADISH WILD_OATS
5180049	2	9.1	10.3	PODMORE RD	29-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180049	3	10.3	11.17	PODMORE RD	29-Aug-04	shari	20	2	2	0	0	0	1	0	0	1	1	2	2	5	6	WILD_RADISH WILD_OATS
5180053	1	0	1.8	VINCENT RD	08-Aug-04	shari	20	2	1	1	0	0	0	1	0	1	0	2	2	8	8	WILD_OATS
5180053	2	1.8	9.21	VINCENT RD	08-Aug-04	shari	20	2	2	1	0	1	1	1	1	2	2	2	2	9	8	WILD_OATS
5180054	1	0	3.3	JOHNSON RD	29-Aug-04	shari	20	0	1	0	0	0	0	0	0	1	2	2	2	4	4	WILD_RADISH WILD_OATS
5180054	2	3.3	5.3	JOHNSON RD	29-Aug-04	shari	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	
5180056	1	0	1.5	BURAKIN NORTH RD	29-Aug-04	shari	20	2	2	1	1	1	1	2	1	1	1	2	2	9	8	
5180056	2	1.5	2.3	BURAKIN NORTH RD	29-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
5180056	3	2.3	4.3	BURAKIN NORTH RD	29-Aug-04	shari	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	
5180057	1	0	5.83	BURAKIN EAST RD	11-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	
5180058	1	0	6.04	CORBETT RD	29-Aug-04	shari	20	2	2	2	2	1	1	2	2	2	2	2	2	11	11	WILD_RADISH WILD_OATS
5180059	1	0	5.8	TASCOSA RD	29-Aug-04	shari	20	2	2	2	2	1	1	2	2	1	1	2	2	10	10	WILD_RADISH WILD_OATS
5180061	1	0	11.7	CLARKE RD	03-Aug-04	k8y	20	2	2	0	0	0	0	2	2	1	1	2	2	7	7	
5180061	2	11.7	12.7	CLARKE RD	03-Aug-04	k8y	20	2	2	0	0	0	0	2	2	1	1	2	2	7	7	

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present	
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
5180062	1	0	5.05	MINCHERTON RD	29-Aug-04	shari	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS	
5180065	1	0	0.5	TOOTRA FENCE RD	05-Aug-04	shaune	20	2	2	2	2	1	2	2	2	1	2	2	0	10	10	WILD_RADISH WILD_OATS	
5180065	2	0.5	4.1	TOOTRA FENCE RD	05-Aug-04	shaune	20	2	2	0	1	1	1	1	1	1	2	2	0	7	7	WILD_RADISH WILD_OATS	
5180065	3	4.1	7.09	TOOTRA FENCE RD	05-Aug-04	shaune	20	2	2	1	1	2	2	2	2	2	2	2	2	11	11	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS	
5180066	1	0	1.2	JENKS RD	05-Aug-04	shaune	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	AFRICAN_LOVEGRASS WILD_RADISH	
5180066	2	1.2	1.5	JENKS RD	05-Aug-04	shaune	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	AFRICAN_LOVEGRASS WILD_RADISH	
5180066	3	1.5	4.5	JENKS RD	05-Aug-04	shaune	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_RADISH AFRICAN_LOVEGRASS	
5180066	4	4.5	4.7	JENKS RD	05-Aug-04	shaune	20	2	2	1	2	1	2	2	2	2	2	2	0	10	10	WILD_RADISH AFRICAN_LOVEGRASS	
5180066	5	4.7	7.7	JENKS RD	05-Aug-04	shaune	20	2	2	0	1	0	1	0	0	1	1	2	2	5	7	WILD_RADISH AFRICAN_LOVEGRASS	
5180066	6	7.7	8.9	JENKS RD	05-Aug-04	shaune	20	2	2	1	0	0	0	0	0	2	1	2	2	7	5	AFRICAN_LOVEGRASS WILD_RADISH	
5180067	1	0	1.8	SMITH RD	12-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_RADISH WILD_OATS	
5180067	2	1.8	4.3	SMITH RD	12-Aug-04	shari	20	2	2	1	1	0	0	0	0	2	2	2	2	7	7	WILD_RADISH WILD_OATS	
5180067	3	4.3	5.4	SMITH RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	WILD_RADISH WILD_OATS
5180067	4	5.4	6.4	SMITH RD	12-Aug-04	shari	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	WILD_RADISH WILD_OATS	
5180067	5	6.4	8	SMITH RD	12-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_RADISH WILD_OATS	
5180067	6	8	9.3	SMITH RD	12-Aug-04	shari	20	1	1	0	0	0	0	1	1	1	1	2	2	5	5	WILD_RADISH WILD_OATS	
5180067	7	9.3	17.2	SMITH RD	12-Aug-04	shari	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_RADISH WILD_OATS	
5180071	1	0	3.06	GLENVAR RD	02-Sep-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	
5180072	1	0	3	NEWTON RD	05-Aug-04	shaune	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3		
5180072	2	3	3.5	NEWTON RD	05-Aug-04	shaune	20	2	2	1	2	0	2	2	2	1	2	2	0	8	10	WILD_RADISH	
5180072	3	3.5	3.9	NEWTON RD	05-Aug-04	shaune	20	2	2	2	1	2	1	2	2	2	1	0	2	10	9	WILD_RADISH	
5180072	4	3.9	6.6	NEWTON RD	05-Aug-04	shaune	40	2	2	0	0	0	1	0	0	1	1	2	2	5	6	WILD_RADISH	
5180072	5	6.6	7.54	NEWTON RD	05-Aug-04	shaune	40	2	2	0	0	0	0	0	0	2	0	2	2	6	4	WILD_RADISH	
5180073	1	0	1	DOUGLAS RD	05-Aug-04	shaune	20	1	2	0	0	0	0	0	1	1	1	2	2	4	6	WILD_RADISH AFRICAN_LOVEGRASS	
5180073	2	1	3.5	DOUGLAS RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	2	2	2	2	6	6	WILD_RADISH AFRICAN_LOVEGRASS	
5180073	3	3.5	6.05	DOUGLAS RD	05-Aug-04	shaune	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_RADISH AFRICAN_LOVEGRASS	
5180074	1	0	7.12	HESFORD RD	29-Aug-04	sharii	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	WILD_RADISH WILD_OATS	
5180076	1	0	2.6	SERIO RD	11-Aug-04	shari	20	2	2	2	2	2	2	2	2	2	2	2	2	12	12		
5180076	2	2.6	5.2	SERIO RD	11-Aug-04	shari	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5		
5180078	1	0	3.6	STRICKLAND RD	31-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8		
5180106	1	0	4.9	FREESTONE RD	03-Aug-04	Corey T	20	2	2	0	0	0	0	1	1	1	1	2	2	6	6	WILD_OATS WILD_RADISH	

A survey of the roadside conservation values in the Shire of Wangan-Ballidu

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
5180106	2	4.9	6.4	FREESTONE RD	03-Aug-04	Corey T	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_OATS WILD_RADISH
5180106	3	6.4	14.6	FREESTONE RD	03-Aug-04	Corey T	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_OATS WILD_RADISH
5180108	1	0	0.8	BAUER RD	03-Aug-04	CT	20	2	2	1	1	1	1	2	2	2	2	2	0	10	8	WILD_OATS
5180110	1	0	3.3	BRENNAN RD	11-Aug-04	shari	20	2	2	1	1	2	2	2	2	2	2	2	2	11	11	
5180110	2	3.3	4.9	BRENNAN RD	11-Aug-04	shari	20	2	2	2	0	2	1	2	1	1	1	2	2	11	7	
5180111	1	0	4	WELLS RD	31-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_RADISH WILD_OATS
5180113	1	0	2.03	SEWELL RD	31-Aug-04	shari	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_RADISH WILD_OATS
5180113	2	2.03	5.53	SEWELL RD	31-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
5180114	1	0	2.2	LITCHFIELD RD	05-Aug-04	kathy sadler	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	WILD_RADISH WILD_OATS
5180114	2	2.2	2.9	LITCHFIELD RD	05-Aug-04	kathy sadler	20	2	2	2	2	2	2	2	2	2	2	0	1	10	11	WILD_RADISH WILD_OATS
5180114	3	2.9	4.1	LITCHFIELD RD	05-Aug-04	kathy sadler	20	2	2	2	2	0	0	2	2	1	1	2	2	9	9	
5180114	4	4.1	4.5	LITCHFIELD RD	05-Aug-04	kathy sadler	40	2	2	0	0	1	1	1	1	1	1	2	2	7	7	WILD_RADISH AFRICAN_LOVEGRASS
5180114	5	4.5	6.3	LITCHFIELD RD	05-Aug-04	kathy sadler	40	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_RADISH AFRICAN_LOVEGRASS
5180114	6	6.3	7.2	LITCHFIELD RD	05-Aug-04	kathy sadler	40	2	2	1	1	0	0	1	1	2	2	2	2	8	8	WILD_RADISH AFRICAN_LOVEGRASS AFRICAN_LOVEGRASS
5180114	7	7.2	7.76	LITCHFIELD RD	05-Aug-04	kathy sadler	40	1	1	1	1	0	0	1	1	1	1	0	2	4	6	WILD_OATS
5180115	1	0	2.3	griffiths road	05-Aug-04	kathy sadler	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS
5180115	2	2.3	3.46	griffiths road	05-Aug-04	kathy sadler	20	1	2	0	0	0	0	0	0	1	1	2	2	4	5	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
5180116	1	0	0.3	MOCARDY RD	29-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	2	2	2	9	10	
5180116	2	0.3	1.6	MOCARDY RD	29-Aug-04	shari	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_RADISH WILD_OATS
5180116	3	1.6	2.46	MOCARDY RD	29-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180117	1	0	4.3	CADOUX SOUTH RD	03-Aug-04	chris sadllercadoux	20	0	0	0	2	0	0	2	1	2	2	2	2	6	7	
5180119	1	0	1.9	CADOUX RIFLE RANGE RD	03-Aug-04	shari	20	2	2	1	1	1	1	1	1	1	1	2	0	8	8	AFRICAN_LOVEGRASS PATERSONS_CURSE
5180120	1	0	0.7	FLAT ROCKS RD	29-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_RADISH WILD_OATS
5180120	2	0.7	2	FLAT ROCKS RD	29-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180120	3	2	5.9	FLAT ROCKS RD	29-Aug-04	shari	20	1	1	0	0	1	1	2	2	1	1	2	2	7	7	WILD_RADISH WILD_OATS
5180121	1	0	3.7	OLD KOKARDINE RD	29-Aug-04	shari	20	2	2	1	1	2	2	2	2	1	1	2	2	10	10	WILD_RADISH WILD_OATS
5180123	1	0	1	KALAJZIC RD	03-Aug-04	k8y	20	2	2	0	0	0	0	2	2	0	0	2	2	6	6	
5180123	2	1	1.6	KALAJZIC RD	03-Aug-04	k8y	20	2	2	0	0	0	0	2	2	1	1	2	2	7	7	
5180123	3	1.6	5.76	KALAJZIC RD	03-Aug-04	k8y	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	
5180124	1	0	2.67	KALSALL RD	11-Aug-04	shari	20	1	1	2	2	1	1	1	1	1	1	2	2	8	8	WILD_RADISH WILD_OATS
5180125	1	0	2.45	BEXTON RD	29-Aug-04	shari	20	1	1	2	2	1	1	1	1	1	1	2	2	8	8	WILD_RADISH WILD_OATS
5180125	2	2.45	3.75	BEXTON RD	29-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS



ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180126	1	0	3.1	SERMON RD	03-Aug-04	Corey T	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_OATS WILD_RADISH
5180126	2	3.1	4.6	SERMON RD	03-Aug-04	Corey T	20	1	0	0	0	0	0	0	0	0	0	2	2	3	2	WILD_OATS WILD_RADISH
5180126	3	4.6	6	SERMON RD	03-Aug-04	Corey T	20	2	2	1	1	0	0	1	1	0	0	2	2	6	6	WILD_OATS WILD_RADISH
5180129	1	0	2.23	LEAHYS RD	03-Aug-04	Corey T	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_OATS
5180130	1	0	4.55	BROPHY RD	03-Aug-04	CT	20	2	2	1	1	0	0	1	1	1	1	2	2	7	7	WILD_OATS WILD_RADISH
5180131	1	0	4.5	COUSINS RD	03-Aug-04	C.T	20	2	2	0	0	0	0	1	1	2	2	2	2	7	7	WILD_RADISH WILD_OATS
5180133	1	0	3.6	BEILBY RD	04-Aug-04	corey t	20	2	2	1	1	1	1	2	2	2	1	2	2	10	9	
5180133	2	3.6	5.2	BEILBY RD	04-Aug-04	corey t	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	
5180133	3	5.2	6.2	BEILBY RD	04-Aug-04	corey t	20	2	2	1	1	0	0	1	0	0	0	2	2	6	5	
5180133	4	6.2	6.7	BEILBY RD	04-Aug-04	corey t	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	
5180133	5	6.7	7.5	BEILBY RD	04-Aug-04	corey t	20	2	2	1	1	0	0	1	1	0	0	2	2	6	6	
5180133	6	7.5	9.6	BEILBY RD	04-Aug-04	corey t	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	
5180133	7	9.6	11.1	BEILBY RD	04-Aug-04	corey t	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	
5180134	1	0	3.4	SCOTNEY RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_OATS WILD_RADISH
5180134	2	3.4	4	SCOTNEY RD	05-Aug-04	shaune	20	2	2	0	2	0	2	1	1	1	2	2	0	6	9	WILD_OATS WILD_RADISH
5180135	1	0	1.2	BARRETT-LENNARD RD	05-Aug-04	shaune	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_RADISH
5180135	2	1.2	1.6	BARRETT-LENNARD RD	05-Aug-04	shaune	20	1	2	0	2	0	2	2	2	0	2	2	2	5	12	WILD_RADISH
5180135	3	1.6	3.85	BARRETT-LENNARD RD	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	WILD_RADISH
5180136	1	0	1.5	BOWEN RD	12-Aug-04	shari	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	WILD_RADISH WILD_OATS
5180136	2	1.5	2	BOWEN RD	12-Aug-04	shari	20	1	0	0	0	0	0	0	0	0	0	2	2	3	2	WILD_RADISH WILD_OATS
5180136	3	2	6.2	BOWEN RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180136	4	6.2	8.1	BOWEN RD	12-Aug-04	shari	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH WILD_OATS
5180141	1	0	0.7	HUNT RD	04-Aug-04	P Whyte	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9	WILD_RADISH WILD_OATS
5180141	2	0.7	1.1	HUNT RD	04-Aug-04	P Whyte	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180141	3	1.1	2.6	HUNT RD	04-Aug-04	P Whyte	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9	WILD_RADISH WILD_OATS
5180141	4	2.6	3	HUNT RD	04-Aug-04	P Whyte	20	0	0	0	0	0	0	2	2	0	0	2	4	4	4	WILD_RADISH WILD_OATS
5180141	5	3	4.2	HUNT RD	04-Aug-04	P Whyte	20	2	2	0	0	1	1	1	1	1	1	2	2	7	7	WILD_RADISH WILD_OATS
5180141	6	4.2	5.8	HUNT RD	04-Aug-04	P Whyte	20	2	2	1	1	0	0	1	1	1	1	2	2	7	7	WILD_RADISH WILD_OATS
5180152	0	0	3.35	STRAHAN RD	29-Aug-04	shari	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	WILD_RADISH WILD_OATS
5180156	1	0	1.3	FOULKES RD	11-Aug-04	shari	20	2	2	0	1	0	0	1	1	2	2	2	2	7	8	
5180159	1	0	0.5	CENTRAL RD	02-Sep-04	shari	20	2	2	1	1	2	1	2	1	2	1	0	0	9	6	
5180159	2	0.5	0.8	CENTRAL RD	02-Sep-04	shari	20	2	1	2	0	2	0	2	0	2	0	0	0	10	1	
5180159	3	0.8	1.1	CENTRAL RD	02-Sep-04	shari	20	2	2	2	2	2	1	2	2	2	1	0	0	10	8	WILD_RADISH WILD_OATS
5180160	1	0	0.3	AVON RD	02-Sep-04	shari	20	0	0	0	0	0	0	1	1	0	0	0	0	1	1	
5180160	2	0.3	0.9	AVON RD	02-Sep-04	shari	20	2	2	1	0	1	1	2	1	1	1	0	0	7	5	WILD_RADISH WILD_OATS
5180160	3	0.9	1.1	AVON RD	02-Sep-04	shari	20	1	0	0	0	0	0	0	0	0	0	0	0	1	0	WILD_RADISH WILD_OATS

A survey of the roadside conservation values in the Shire of Wangan-Ballidu

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present	
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
5180163	1	0	0.38	PIONEER RD	02-Sep-04	shari	20	2	2	2	1	2	1	0	1	2	1	0	0	8	6		
5180163	2	0.38	1.18	PIONEER RD	02-Sep-04	shari	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10		
5180167	1	0	2.94	GASTON RD	08-Aug-04	shari	20	2	2	1	1	1	1	1	2	1	1	2	2	8	9	WILD_OATS	
5180171	1	0	0.4	MELBOURNE RD	02-Sep-04	shari	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_RADISH WILD_OATS	
5180171	2	0.4	0.6	MELBOURNE RD	02-Sep-04	shari	20	2	2	1	2	1	2	1	2	1	2	2	2	8	12	WILD_RADISH WILD_OATS	
5180175	1	0	1.02	ARMSTRONG RD	12-Aug-04	shari	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_RADISH WILD_OATS	
5180175	2	1.02	3.02	ARMSTRONG RD	12-Aug-04	shari	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH WILD_OATS	
5180175	3	3.02	4.22	ARMSTRONG RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS	
5180175	4	4.22	5.42	ARMSTRONG RD	12-Aug-04	shari	20	2	2	1	1	0	0	0	0	2	2	2	2	7	7	WILD_RADISH WILD_OATS	
5180175	5	5.42	5.92	ARMSTRONG RD	12-Aug-04	shari	20	0	1	0	1	0	0	0	0	0	1	2	2	2	5	5	WILD_RADISH WILD_OATS
5180177	1	0	1.68	WILKINS RD	04-Aug-04	chris	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_RADISH WILD_OATS	
5180177	2	1.68	4.02	WILKINS RD	04-Aug-04	chris	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_RADISH WILD_OATS	
5180181	1	0	0.73	AIRPORT RD	03-Aug-04	sharicorey	20	2	2	2	2	1	1	2	2	2	2	2	2	9	9	WILD_RADISH WILD_OATS	
5180192	1	0.8	4.2	BURAKIN-WIALKI RD	11-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	WILD_RADISH WILD_OATS	
5180193	1	4.5	6.4	DOWERIN-KALANNIE RD	08-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_OATS	
5180193	2	6.4	9.4	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	1	0	0	0	0	0	0	0	1	0	2	2	4	2	AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS	
5180193	3	9.4	17.4	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	AFRICAN_LOVEGRASS	
5180193	4	17.4	24	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	WILD_OATS WILD_RADISH	
5180193	5	24	25.4	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_OATS WILD_RADISH	
5180193	6	25.4	29.4	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_OATS WILD_RADISH	
5180193	7	29.4	30.4	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	1	0	1	0	1	0	2	1	1	0	2	2	8	3	WILD_OATS WILD_RADISH	
5180193	8	30.4	39.8	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	1	1	1	1	1	1	2	1	1	1	2	2	8	7	WILD_OATS WILD_RADISH	
5180193	9	39.8	41.4	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	0	1	0	0	0	0	0	0	0	1	2	2	2	4		
5180193	10	41.4	42.4	DOWERIN-KALANNIE RD	11-Aug-04	shari	20	1	1	2	2	1	1	2	1	1	1	2	2	9	8		
5180194	1	0	6.6	WONGAN HILLS BURAKIN RD	08-Aug-04	shari	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	WILD_OATS	
5180194	2	6.6	11.5	WONGAN HILLS BURAKIN RD	08-Aug-04	shari	20	2	2	1	1	0	0	2	2	1	1	2	2	8	8	WILD_OATS	
5180194	3	11.5	13.7	WONGAN HILLS BURAKIN RD	08-Aug-04	shari	20	1	2	0	0	0	0	0	0	0	1	2	2	3	5	WILD_OATS	
5180194	4	13.7	39.02	WONGAN HILLS BURAKIN RD	08-Aug-04	shari	20	2	2	1	1	2	2	2	2	1	1	2	2	10	10		

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180197	1	7.1	7.9	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	0	2	0	0	0	0	0	0	0	0	2	2	2	4	WILD_RADISH AFRICAN_LOVEGRASS
5180197	2	7.9	8.4	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	0	0	1	1	2	0	0	2	5	5	WILD_RADISH AFRICAN_LOVEGRASS
5180197	3	8.4	11.8	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	0	0	0	0	1	0	2	2	5	4	WILD_RADISH AFRICAN_LOVEGRASS
5180197	4	11.8	13.4	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	40	2	2	0	1	0	1	0	1	1	2	2	2	5	9	WILD_RADISH AFRICAN_LOVEGRASS
5180197	5	13.4	14.2	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	40	2	2	1	1	0	0	1	1	1	0	2	2	7	6	WILD_RADISH AFRICAN_LOVEGRASS
5180197	6	14.2	15.3	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	1	2	0	0	0	0	0	0	0	1	2	2	3	5	WILD_RADISH AFRICAN_LOVEGRASS
5180197	7	15.3	18.2	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	0	0	0	0	0	1	2	2	4	5	WILD_RADISH AFRICAN_LOVEGRASS
5180197	8	18.2	20.9	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	1	2	0	0	0	0	2	2	0	2	2	2	5	8	WILD_RADISH AFRICAN_LOVEGRASS
5180197	9	20.9	21.5	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	0	1	2	2	2	1	2	2	8	8	WILD_RADISH AFRICAN_LOVEGRASS
5180197	10	21.5	23.3	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	1	1	1	1	2	0	2	1	2	2	10	7	WILD_RADISH AFRICAN_LOVEGRASS
5180197	11	23.3	24.2	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_RADISH
5180197	12	24.2	25.3	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	1	1	2	2	0	0	2	2	7	7	AFRICAN_LOVEGRASS WILD_RADISH
5180197	13	25.3	27.7	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_RADISH
5180197	14	27.7	28.1	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_RADISH
5180197	15	28.1	30	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	1	1	2	2	0	1	2	2	7	8	AFRICAN_LOVEGRASS WILD_RADISH
5180197	16	30	30.6	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	1	0	0	0	0	0	0	0	1	2	2	4	4	AFRICAN_LOVEGRASS WILD_RADISH
5180197	17	30.6	34.7	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	20	2	2	0	0	1	1	2	2	1	1	2	2	8	8	AFRICAN_LOVEGRASS WILD_RADISH
5180197	18	34.7	36.3	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	100	2	2	2	1	2	1	2	2	2	2	1	2	11	10	AFRICAN_LOVEGRASS WILD_RADISH
5180197	19	36.3	37.8	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	100	2	2	0	0	0	0	0	0	1	1	2	2	5	5	AFRICAN_LOVEGRASS WILD_RADISH
5180197	20	37.8	39.4	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	100	2	2	0	0	1	1	2	2	2	2	2	2	9	9	AFRICAN_LOVEGRASS WILD_RADISH
5180197	21	39.4	40.3	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	100	1	2	0	2	0	2	2	2	0	2	2	1	5	11	AFRICAN_LOVEGRASS WILD_RADISH

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
5180197	22	40.3	42.7	WONGAN HILLS-KOORDA RD	03-Aug-04	katie	100	1	2	0	0	0	0	2	2	1	1	2	2	6	7	AFRICAN_LOVEGRASS WILD_RADISH
5180199	1	4.66	6.16	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	0	2	0	1	1	1	0	0	1	2	2	2	4	8	WILD_RADISH WILD_OATS
5180199	2	6.16	7.26	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	2	2	2	2	2	2	2	2	2	2	2	2	12	12	WILD_RADISH WILD_OATS
5180199	3	7.26	7.66	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	2	2	0	0	1	1	1	1	1	1	2	2	7	7	WILD_RADISH WILD_OATS
5180199	4	7.66	8.96	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	2	2	2	2	2	2	2	2	1	2	2	2	12	11	WILD_RADISH WILD_OATS
5180199	5	8.96	9.66	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	2	2	2	2	2	2	2	2	2	2	2	2	12	12	WILD_RADISH WILD_OATS
5180199	6	9.66	11.66	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	2	2	2	2	2	2	2	2	2	2	2	2	12	12	WILD_RADISH WILD_OATS
5180199	7	11.66	13.66	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180199	8	13.66	14.56	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
5180199	9	14.56	18.76	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
5180199	10	18.76	22.86	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	2	2	1	1	0	0	0	0	1	1	2	2	6	6	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
5180199	11	22.86	25.96	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
5180199	12	25.96	27.16	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
5180199	13	27.16	29.86	WONGAN HILLS-WADDINGTON RD	12-Aug-04	shari	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
M032	1	94.57	98.27	Northam Pithara Rd	05-Aug-04	shaune	100	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
M032	2	98.27	105.97	Northam Pithara Rd	05-Aug-04	shaune	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
M032	3	105.97	109.67	Northam Pithara Rd	05-Aug-04	shaune	20	2	2	0	1	0	1	0	2	1	2	1	2	4	10	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
M032	4	109.67	112.77	Northam Pithara Rd	05-Aug-04	shaune	20	2	2	0	0	0	0	2	2	2	2	1	2	7	8	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
M032	5	112.77	119.57	Northam Pithara Rd	05-Aug-04	shaune	20	2	2	0	0	1	1	0	0	1	2	2	2	6	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
M032	6	119.57	126.47	Northam Pithara Rd	05-Aug-04	shaune	20	2	2	0	1	0	1	0	2	2	2	2	2	6	10	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
M032	7	126.47	128.2	Northam Pithara Rd	05-Aug-04	shaune	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
M056	1	0	6.4	Wongan Hills Calingiri Rd	11-Aug-04	shari	20	2	2	0	0	0	0	1	1	1	1	2	2	6	6	

A survey of the roadside conservation values in the Shire of Wongan-Ballidu

ROAD#	Section#	ODStart	ODFinish	Road Name	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score		Nominated Weeds Present
		(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
M056	2	6.4	11.2	Wongan Hills Calingiri Rd	11-Aug-04	shari	20	2	2	0	1	1	2	2	2	1	2	2	2	8	11	WILD_OATS
M056	3	11.2	16.4	Wongan Hills Calingiri Rd	11-Aug-04	shari	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	WILD_OATS
M056	4	16.4	20.39	Wongan Hills Calingiri Rd	11-Aug-04	shari	20	2	2	0	1	0	1	1	1	1	1	2	2	6	8	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH AFRICAN_LOVEGRASS

# Appendix

## 3





## APPENDIX 3

Road names and lengths: Shire of Wongan-Ballidu (source- Main Roads WA June 2004)

Road number	Road name	Road length
5180081	ACKLAND ST	0.85
5180181	AIRPORT RD	0.73
5180099	ALPHA ST	0.49
5180175	ARMSTRONG RD	5.92
5180160	AVON RD	1.14
5180077	BAILEY RD	4.10
5180044	BALLERMINA RD	10.80
5180003	BALLIDU EAST RD	25.02
5180004	BALLIDU-BINDI BINDI RD	26.64
5180032	BALLIDU-SOUTH EAST RD	12.40
5180085	BANKSIA CR	0.20
5180101	BAROOTA ST	0.68
5180135	BARRETT-LENNARD RD	3.85
5180042	BARROW RD	12.39
5180108	BAUER RD	0.76
5180133	BEILBY RD	11.10
5180125	BEXTON RD	3.75
5180052	BOOTH RD	1.81
5180182	BOOTH ST	0.10
5180161	BOUNDARY RD	1.15
5180136	BOWEN RD	8.10
5180105	BRDBENT ST	0.17
5180110	BRENNAN RD	4.90
5180130	BROPHY RD	4.55
5180043	BUNKETCH-KULJA RD	10.59
5180100	BUNYIP ST	0.22
5180057	BURAKIN EAST RD	5.83
5180056	BURAKIN NORTH RD	4.27
5180192	BURAKIN-WIALKI RD	6.72
5180016	CADOUX NORTH RD	13.67
5180119	CADOUX RIFLE RANGE RD	1.78
5180117	CADOUX SOUTH RD	4.85
5180095	CAMM ST	0.62
5180179	CARTER ST	0.18
5180162	CEMETERY RD	0.40
5180159	CENTRAL RD	1.25
5180061	CLARKE RD	12.70
5180068	COCHRANE RD	0.70
5180093	COMMERCIAL ST	1.48
5180140	CONWAY RD	1.25
5180145	COOMER ST	0.38
5180165	COONEY RD	2.13
5180058	CORBETT RD	6.04
5180131	COUSINS RD	4.50
5180033	CRAIG RD	17.70
5180039	CRASKE RD	10.50
5180021	DAMBORING WEST RD	20.90
5180173	DANUBIN ST	2.09
5180045	DAVIES RD	5.90
5180151	DAVIES RD	3.09
5180047	DEGRUSSAS RD	27.27
5180092	DEPOT RD	0.49
5180073	DOUGLAS RD	6.05
5180193	DOWERIN-KALANNIE RD	43.69
5180164	ELLIS ST	0.25
5180090	ELPHIN CR	0.39

Road number	Road name	Road length
5180138	ELPHIN KORRALLING RD	9.70
5180102	FAIRBANKS ST	2.25
5180096	FEDERATION ST	1.16
5180060	FEEDMILL RD	0.05
5180188	FENTON ST SERVICE RD	0.75
5180186	FINCK RD	1.69
5180120	FLAT ROCKS RD	5.79
5180156	FOULKES RD	1.28
5180137	FOWLER RD	2.25
5180106	FREESTONE RD	14.57
5180027	GABALONG EAST RD	14.65
5180144	GANZER ST	0.24
5180167	GASTON RD	2.94
5180071	GLENVAR RD	3.06
5180115	GRIFFITHS RD	3.46
5180091	HARVEST ST	0.09
5180074	HESFORD RD	7.12
5180122	HOLBEN RD	5.22
5180127	HOOPER RD	8.47
5180195	HOSPITAL RD	4.49
5180038	HOURIGAN RD	10.60
5180141	HUNT RD	5.73
5180013	JENKIN RD	3.60
5180066	JENKS RD	9.05
5180148	JENKS ST	0.12
5180180	JENSEN ST	0.68
5180054	JOHNSON RD	5.30
5180079	JOHNSON ST	0.84
5180051	JONES RD	4.84
5180185	JOYNES RD	1.81
5180123	KALAJZIC RD	5.76
5180011	KALGUDDERING EAST RD	21.30
5180036	KALGUDDERING NORTH RD	5.76
5180191	KALGUDDERING NORTH RD(EAST)	0.30
5180112	KALGUDDERING RD	3.30
5180014	KALGUDDERING WEST RD	10.50
5180124	KALSALL RD	2.67
5180024	KIRWAN EAST RD	6.76
5180022	KIRWAN RD	13.79
5180023	KIRWAN WEST RD	16.00
5180018	KOKARDINE EAST RD	5.98
5180017	KOKARDINE WEST RD	16.39
5180009	KONDUT EAST RD	23.20
5180031	KONDUT SOUTH EAST RD	15.39
5180010	KONDUT WEST RD	23.21
5180034	KORALLING RD	11.53
5180146	KORALLING ST	0.14
5180029	LAKE HINDS NORTH RD	16.56
5180129	LEAHYS RD	2.23
5180118	LEGO RD	7.98
5180114	LITCHFIELD RD	7.76
5180037	LLOYD RD	7.20
5180070	MAIL ROUTE RD	4.85
5180132	MAILEY RD	1.30
5180006	MANMANNING RD	32.20
5180086	MARTIN ST	0.21
5180150	MCCASHNEY RD	9.31
5180097	MCNEIL RD	0.40
5180015	MEADOWS RD	9.55
5180171	MELBOURNE RD	1.14
5180046	MILLSTEED RD	3.28

Road number	Road name	Road length
5180062	MINCHERTON RD	5.05
5180080	MITCHELL ST	0.69
5180116	MOCARDY RD	2.46
5180094	MOCARDY ST	0.21
5180169	MONTAGUE RD	1.38
5180007	MOONIJIN WEST RD	23.48
5180107	MOORE ST	0.42
5180002	MOUNTJOY RD	5.39
5180069	MURPHY RD	0.56
5180072	NEWTON RD	7.54
5180084	NUGENT ST	0.32
5180030	OLD BALLIDU RD	18.63
5180121	OLD KOKARDINE RD	6.51
5180139	OLIVER RD	1.90
5180088	PARKER PL	0.20
5180064	PARKER RD	2.09
5180083	PATTERSON ST	0.70
5180184	PHILLIPS RD	1.71
5180163	PIONEER RD	1.18
5180049	PODMORE RD	11.17
5180040	QUAIN RD	10.60
5180196	QUINLAN ST	1.28
5180025	RABBIT PROOF FENCE RD	26.91
5180143	RAY ST	0.24
5180149	REGAN ST	1.56
5180055	REID RD	9.98
5180041	REYNOLDS RD	10.75
5180103	REYNOLDSON ST	0.20
5180012	RIFLE RANGE RD	31.10
5180109	ROBINSON RD	2.15
5180089	ROGERS ST	0.25
5180187	SADLER RD	0.95
5180134	SCOTNEY RD	5.81
5180076	SERIO RD	9.74
5180126	SERMON RD	6.00
5180113	SEWELL RD	5.53
5180020	SHEOAK RD	12.40
5180183	SHIELDS CT	0.42
5180048	SILVER RD	7.22
5180067	SMITH RD	16.65
5180087	STICKLAND ST	0.52
5180026	STOKES RD	15.02
5180152	STRAHAN RD	3.35
5180078	STRICKLAND RD	3.60
5180168	SUBURBAN RD	0.55
5180128	SWIFT RD	6.67
5180059	TASCOSA RD	5.75
5180200	THE LANE	3.10
5180065	TOOTRA FENCE RD	7.09
5180170	TOWNSEND ST	0.60
5180053	VINCENT RD	9.21
5180050	WALKER RD	5.10
5180190	WALLIS ST (EAST)	0.26
5180098	WALLIS ST(WEST)	0.22
5180104	WANDOO CR	1.12
5180174	WARD RD	2.48
5180111	WELLS RD	4.00
5180019	WHITE WELL RD	11.15
5180063	WHYTE RD	5.07
5180028	WILDING RD	14.65
5180142	WILDING ST	0.40

<b>Road number</b>	<b>Road name</b>	<b>Road length</b>
5180177	WILKINS RD	4.02
5180005	WILSON RD	8.40
5180082	WILSON ST	0.42
5180035	WONGAN CADOUX RD	16.20
5180194	WONGAN HILLS-BURAKIN RD	39.02
5180197	WONGAN HILLS-KOORDA RD	47.20
5180198	WONGAN HILLS-KOORDA RD	7.20
5180199	WONGAN HILLS-WADDINGTON RD	29.86
5180008	YERECOIN SOUTH EAST RD	13.50

# Appendix

## 4

## APPENDIX 4

### Flora species in the Shire of Wongan-Ballidu (W.A Herbarium)

**Note:** not a comprehensive list.

\* = Weed species

P = Priority species

R = Rare species

Acacia acanthoclada subsp. acanthoclada  
Acacia aciphylla  
Acacia acuaria  
Acacia acuminata subsp. acuminata ms  
Acacia acutata  
Acacia aestivalis  
Acacia andrewsii  
Acacia arcuatis ms P2  
Acacia assimilis  
Acacia assimilis subsp. assimilis  
Acacia bidentata  
Acacia blakelyi  
Acacia botrydion P1  
Acacia brumalis  
Acacia cochlocarpa subsp. velutinoso ms P1  
Acacia colletioides  
Acacia congesta  
Acacia congesta subsp. congesta ms  
Acacia congesta subsp. wonganensis ms P2  
Acacia daviesioides  
Acacia denticulosa R  
Acacia dielsii  
Acacia dilatata  
Acacia dissona var. indoloria P3  
Acacia drewiana subsp. minor P2  
Acacia dura P2  
Acacia duriuscula  
Acacia enervia subsp. explicata  
Acacia eremaea  
Acacia eremophila var. eremophila  
Acacia ericksoniae ms  
Acacia ericksonii ms  
Acacia erinacea  
Acacia erioclada  
\*Acacia farnesiana  
Acacia fauntleroyi  
Acacia filifolia P3  
Acacia flavipila var. ovalis  
Acacia fragilis  
Acacia gibbosa  
Acacia hemiteles  
Acacia heteroneura var. jutsonii  
Acacia heteroneura var. petila  
Acacia jacksonioides  
Acacia lasiocalyx  
Acacia lasiocarpa var. bracteolata  
Acacia latipes  
Acacia latipes subsp. latipes ms  
Acacia leptospermoides  
Acacia leptospermoides subsp. leptospermoides  
Acacia ligulata  
Acacia ligustrina  
Acacia lineolata subsp. lineolata  
Acacia lirellata subsp. compressa ms P2  
Acacia longispinea  
Acacia mackeyana  
Acacia merinthophora  
Acacia merrallii  
Acacia microbotrya  
Acacia moirii subsp. recurvistipula  
Acacia multispicata  
Acacia neurophylla subsp. erugata  
Acacia neurophylla subsp. neurophylla  
Acacia nigripilosa  
Acacia nigripilosa subsp. nigripilosa ms  
Acacia nyssophylla  
Acacia orbifolia  
Acacia phaeocalyx P3  
Acacia pharangites R  
Acacia preissiana  
Acacia pulchella var. glaberrima  
\*Acacia pycnantha  
Acacia pygmaea R  
Acacia repanda P3  
Acacia resinimarginea  
Acacia resinosa ms  
Acacia restiacea  
Acacia saligna  
Acacia saxatilis  
Acacia scalena ms P3  
Acacia scirpifolia  
Acacia sclerophylla var. sclerophylla  
Acacia sclerosperma subsp. sclerosperma  
Acacia semicircularis R  
Acacia sericocarpa  
Acacia sessilispica  
Acacia shuttleworthii  
Acacia sp.P170(B.R.Maslin 4474)  
Acacia spinosissima  
Acacia stenoptera  
Acacia stereophylla var. stereophylla  
Acacia sulcata var. platyphylla  
Acacia tratmaniana  
Acacia trinalis ms P1  
Acacia ulicina  
Acacia vassalii R  
Acacia yorkkrakinensis subsp. acrita  
\*Acetosa vesicaria  
Actinobole uliginosum  
Actinostrobus arenarius  
Actinostrobus pyramidalis  
Actinotus superbus  
Adenanthos drummondii  
Adenanthos meisneri  
\*Adonis microcarpa  
Agonis linearifolia  
\*Aira cupaniana  
Allocauarina acutivalvis  
Allocauarina acutivalvis subsp. acutivalvis  
Allocauarina campestris  
Allocauarina corniculata  
Allocauarina drummondiana



Allocasuarina huegeliana  
 Allocasuarina humilis  
 Allocasuarina microstachya  
 Alyogyne hakeifolia  
 Alyogyne huegelii var. wrayae ms  
 Alyxia buxifolia  
 Amphibromus nervosus  
 Amphipogon strictus  
 Amphipogon strictus var. strictus  
 Amyema miraculosa subsp. miraculosa  
 \*Anagallis arvensis  
 Andersonia aff. lehmanniana  
 Andersonia lehmanniana  
 Andersonia lehmanniana subsp. pubescens  
 Angianthus micropodioides P3  
 Angianthus pygmaeus  
 Angianthus tomentosus  
 Anigozanthos humilis subsp. chrysanthus R  
 Anigozanthos humilis subsp. humilis  
 Anthocercis anisantha subsp. anisantha  
 Anthocercis genistoides  
 Anthotroche pannosa  
 Apium annuum  
 \*Arctotheca calendula  
 Aristida contorta  
 Arthropodium curvipes  
 Arthropodium dyeri  
 Astartea heteranthera  
 Astroloma epacridis  
 Astroloma serratifolium  
 Atriplex acutibractea subsp. karoniensis  
 Atriplex bunburyana  
 Atriplex exilifolia  
 Atriplex holocarpa  
 Atriplex hymenotheca  
 Atriplex semibaccata  
 Atriplex semilunaris  
 Austrodanthonia caespitosa  
 Austrostipa elegantissima  
 Austrostipa eremophila  
 Austrostipa hemipogon  
 Austrostipa variabilis  
 \*Avena barbata  
 \*Avena fatua  
 \*Avena sativa  
 Baeckea crispiflora  
 Baeckea cryptonoma ms  
 Baeckea elderiana  
 Baeckea grandis  
 Baeckea megaflorea ms  
 Baeckea muricata  
 Baeckea recurva ms  
 Baeckea sp.Wubin(M.E.Trudgen 5404)  
 Banksia attenuata  
 Banksia prionotes  
 Beaufortia aestiva ms  
 Beaufortia bracteosa  
 Beaufortia elegans  
 Beaufortia interstans  
 Beaufortia micrantha  
 Beaufortia micrantha var. puberula  
 Billardiera bicolor  
 Billardiera coriacea  
 Billardiera sericea  
 Blennospora drummondii  
 Boronia coerulescens  
 Boronia coerulescens subsp. spicata  
 Boronia coerulescens subsp. spinescens  
 Boronia ericifolia P2  
 Boronia molloyae  
 Boronia ramosa subsp. anethifolia  
 Borya constricta  
 Borya laciniata  
 Borya nitida  
 Borya sphaerocephala  
 Bossiaea concinna  
 Bossiaea eriocarpa  
 Brachyscome bellidioides  
 Brachyscome ciliaris  
 Brachyscome perpusilla  
 Brachyscome perpusilla var. tenella  
 Brachyscome pusilla  
 \*Brassica tournefortii  
 Bromus arenarius  
 \*Bromus diandrus  
 \*Bromus rubens  
 Brunonia australis  
 Bulbine semibarbata  
 Burchardia congesta  
 Caesia alfordii ms  
 Caladenia cristata P4  
 Caladenia denticulata  
 Caladenia dimidia ms  
 Caladenia drummondii  
 Caladenia falcata  
 Caladenia filifera  
 Caladenia flaccida subsp. flaccida ms  
 Caladenia flaccida subsp. pulchra ms  
 Caladenia flava subsp. flava ms  
 Caladenia footeana ms  
 Caladenia hiemalis ms  
 Caladenia hirta subsp. rosea ms  
 Caladenia longicauda subsp. eminens ms  
 Caladenia multiclavia  
 Caladenia pachychila ms  
 Caladenia radialis  
 Caladenia roei  
 Caladenia saccharata  
 Caladenia vulgata ms  
 Caladenia x cala ms  
 Calandrinia corrigioloides  
 Calandrinia eremaea  
 Callistemon phoeniceus  
 Callitris canescens  
 Callitris roei  
 Calothamnus accedens X  
 Calothamnus asper  
 Calothamnus brevifolius P3  
 Calothamnus chrysantherus  
 Calothamnus gilesii  
 \*Calothamnus quadrifidus  
 Calothamnus quadrifidus var. "unsorted"  
 Calothamnus sanguineus  
 Calotis hispidula  
 Calycopeplus paucifolius  
 Calytrix acutifolia  
 Calytrix breviseta subsp. stipulosa  
 Calytrix depressa  
 Calytrix glutinosa  
 Calytrix gracilis

*Calytrix habrantha*  
*Calytrix leschenaultii*  
*Calytrix purpurea* P2  
*Calytrix sapphirina*  
*Calytrix strigosa*  
*Calytrix violacea*  
*Cassytha aurea* var. *hirta*  
*Cassytha flava*  
*Cassytha glabella*  
*Cassytha glabella* forma *dispar*  
*Cassytha melantha*  
*Cassytha pomiformis*  
*Casuarina obesa*  
*Caustis dioica*  
 \**Centaurea melitensis*  
*Centaurium spicatum*  
*Centrolepis aristata*  
*Centrolepis drummondiana*  
*Centrolepis humillima*  
*Centrolepis polygyna*  
*Cephalopterum drummondii*  
 \**Cerastium glomeratum*  
*Ceratogyne obionoides*  
*Chamaescilla corymbosa* var. *corymbosa*  
*Chamaexeros fimbriata*  
*Chamelaucium brevifolium*  
*Chamelaucium ciliatum*  
*Chamelaucium conostigmum* ms P3  
*Chamelaucium drummondii* subsp. *drummondii*  
 ms  
*Chamelaucium drummondii* subsp. *hallii* ms  
*Chamelaucium micranthum*  
*Cheilanthes austrotenuifolia*  
*Cheilanthes lasiophylla*  
*Cheiranthra filifolia* var. *filifolia*  
 \**Chenopodium murale*  
 \**Chondrilla juncea*  
*Chorizema aciculare* subsp. *laxum*  
*Chorizema aciculare* subsp. *laxum*  
*Chorizema genistoides*  
*Chorizema humile* R  
*Chorizema rhynchotropis*  
*Chrysocephalum apiculatum*  
*Chrysocoryne drummondii*  
*Chrysocoryne tridens*  
*Clematis delicata* ms  
*Codonocarpus cotinifolius*  
*Comesperma calymega*  
*Comesperma drummondii*  
*Comesperma integerrimum*  
*Comesperma scoparium*  
*Comesperma volubile*  
*Commersonia pulchella*  
*Conospermum brownii*  
*Conospermum ephedroides*  
*Conospermum polycephalum*  
*Conospermum stoechadis*  
*Conospermum stoechadis* subsp. *stoechadis*  
*Conostephium pendulum*  
*Conostylis aculeata*  
*Conostylis androstemma*  
*Conostylis prolifera*  
*Conostylis setigera* subsp. *setigera*  
*Conostylis villosa*  
*Conostylis wonganensis* R  
*Convolvulus remotus*  
 \**Cotula bipinnata*  
 \**Cotula coronopifolia*  
*Crassula colorata*  
*Crassula colorata* var. *acuminata*  
*Crassula colorata* var. *colorata*  
*Crassula colorata* var. *tuberculata*  
*Crassula decumbens* var. *decumbens*  
*Crassula exserta*  
 \**Crassula natans* var. *minus*  
*Cressa cretica*  
*Cryptandra dielsii* ms P2  
*Cryptandra micrantha* ms  
*Cryptandra minutifolia* subsp. *minutifolia*  
*Cryptandra myriantha*  
*Cryptandra pungens*  
*Cyanicula deformis* ms  
*Cyanicula gemmata* ms  
*Cyanostegia angustifolia*  
*Cyanostegia microphylla*  
*Cyphanthera microphylla*  
*Dactyloctenium radulans*  
*Dampiera eriocephala*  
*Dampiera glabrescens* P1  
*Dampiera haematotricha* subsp. *dura*  
*Dampiera juncea*  
*Dampiera lavandulacea*  
*Dampiera lindleyi*  
*Dampiera luteiflora*  
*Dampiera oligophylla*  
*Dampiera spicigera*  
*Dampiera teres*  
*Dampiera wellsiana*  
*Danthonia semiannularis*  
*Darwinia capitellata*  
*Darwinia halophila* ms  
*Darwinia purpurea*  
*Daucus glochidiatus*  
*Daviesia benthamii* subsp. *acanthoclona*  
*Daviesia benthamii* subsp. *acanthoclona* ms  
*Daviesia benthamii* subsp. *benthamii*  
*Daviesia cardiophylla*  
*Daviesia debilior* subsp. *sinuans* P3  
*Daviesia euphorbioides* R  
*Daviesia hakeoides* subsp. *subnuda*  
*Daviesia hakeoides* subsp. *subnuda* ms  
*Daviesia nematophylla*  
*Daviesia nudiflora* subsp. *drummondii*  
*Daviesia nudiflora* subsp. *hirtella*  
*Daviesia nudiflora* subsp. *nudiflora*  
*Daviesia pachyloma*  
*Daviesia spiralis* R  
*Desmocladius asper* ms  
*Desmocladius fasciculatus* ms  
*Desmocladius myriocladus* ms  
*Desmocladius parthenicus* ms  
*Dianella revoluta* var. *divaricata*  
*Dichopogon capillipes*  
*Dicrasytis parvifolia*  
*Dicrasytis reticulata*  
*Dicrasytis velutina*  
*Didymanthus roei*  
*Diplolaena velutina*  
*Diplopeltis huegelii* var. *lehmanii* ms  
*Disphyma crassifolium* subsp. *clavellatum*

Diuris brumalis  
 Diuris porrifolia  
 Diuris setacea  
 Dodonaea adenophora  
 Dodonaea bursariifolia  
 Dodonaea divaricata  
 Dodonaea inaequifolia  
 Dodonaea larreoides  
 Dodonaea pinifolia  
 Dodonaea viscosa subsp. angustissima  
 Drosera andersoniana  
 Drosera glanduligera  
 Drosera heterophylla  
 Drosera leucoblasta  
 Drosera macrantha subsp. macrantha  
 Drosera macrophylla  
 Drosera menziesii subsp. basifolia  
 Drosera stolonifera subsp. rupicola  
 Drosera stricticaulis  
 Drosera subhirtella subsp. subhirtella  
 Drummondita hassellii  
 Drummondita hassellii var. hassellii  
 Dryandra comosa P4  
 Dryandra conferta subsp. conferta ms  
 Dryandra conferta var. conferta ms  
 Dryandra conferta var. conferta  
 Dryandra conferta var. conferta ms  
 Dryandra fraseri var. fraseri  
 Dryandra hewardiana  
 Dryandra lindleyana subsp. pollostia P3  
 Dryandra pulchella P4  
 Dryandra purdieana  
 Dryandra sessilis var. sessilis  
 Dryandra shanklandiorum P4  
 Dryandra wonganensis P2  
 Ecdeiocolea monostachya  
 \*Echium plantagineum  
 \*Ehrharta brevifolia var. cuspidata  
 \*Ehrharta longiflora  
 Elythranthera brunonis  
 Enchylaena lanata  
 Epilobium hirtigerum  
 Eragrostis curvula  
 Eragrostis dielsii  
 Eremaea atala  
 Eremaea pauciflora  
 Eremaea pauciflora var. "unsorted"  
 Eremaea pauciflora var. calyptra  
 Eremaea pauciflora var. pauciflora  
 Eremophila decipiens  
 Eremophila decipiens subsp. decipiens ms  
 Eremophila deserti  
 Eremophila drummondii  
 Eremophila glabra subsp. albicans  
 Eremophila lehmanniana  
 Eremophila miniata  
 Eremophila oldfieldii subsp. oldfieldii  
 Eremophila oppositifolia subsp. angustifolia ms  
 Eremophila papillata ms  
 Eremophila sargentii P2  
 Eremophila subfloccosa subsp. lanata ms  
 Eremophila subfloccosa subsp. subfloccosa  
 Eremophila ternifolia R  
 Eremophila viscida R  
 Eriachne ovata  
 Erichsenia uncinata  
 Eriochilus dilatatus subsp. undulatus ms  
 Eriostemon ? coccineus  
 Eriostemon deserti  
 Eriostemon nodiflorus subsp. nodiflorus  
 Eriostemon rhomboideus  
 Eriostemon thryptomenoides  
 Eriostemon tomentellus  
 Eriostemon wonganensis R  
 \*Erodium botrys  
 \*Erodium cicutarium  
 Erodium cygnorum  
 Erodium cygnorum subsp. cygnorum  
 Erymophyllum ramosum subsp. ramosum  
 Erymophyllum tenellum  
 Eucalyptus aff. rigidula  
 Eucalyptus arachnaea  
 Eucalyptus arachnaea subsp. arachnaea  
 Eucalyptus argyphaea  
 Eucalyptus brachycorys  
 Eucalyptus burracoppinensis  
 Eucalyptus caesia subsp. caesia P4  
 Eucalyptus capillosa subsp. capillosa  
 Eucalyptus capillosa subsp. polyclada  
 Eucalyptus celastroides subsp. virella  
 Eucalyptus ceratocorys  
 Eucalyptus crucis subsp. lanceolata  
 Eucalyptus densa subsp. densa  
 Eucalyptus dolichocera ms  
 Eucalyptus drummondii  
 Eucalyptus ebbanoensis  
 Eucalyptus ebbanoensis subsp. ebbanoensis  
 Eucalyptus eremophila  
 Eucalyptus eremophila subsp. eremophila  
 Eucalyptus erythronema  
 Eucalyptus erythronema var. erythronema  
 Eucalyptus erythronema var. marginata  
 Eucalyptus eudesmioides  
 Eucalyptus eudesmioides subsp. eudesmioides  
 Eucalyptus flocktoniae  
 Eucalyptus gardneri  
 Eucalyptus gardneri subsp. gardneri  
 Eucalyptus hypochlamydea subsp. ecdysiastes  
 ms  
 Eucalyptus hypochlamydea subsp.  
 hypochlamydea ms  
 Eucalyptus incrassata  
 Eucalyptus kochii subsp. kochii  
 Eucalyptus kochii subsp. plenissima  
 Eucalyptus leptopoda subsp. arctata  
 Eucalyptus longicornis  
 Eucalyptus loxophleba subsp. loxophleba  
 Eucalyptus loxophleba subsp. supralaevis  
 Eucalyptus macrocarpa subsp. macrocarpa  
 Eucalyptus macrocarpa x pyriformis P1  
 Eucalyptus myriadena subsp. myriadena  
 Eucalyptus obtusiflora  
 Eucalyptus oldfieldii  
 Eucalyptus olivina  
 Eucalyptus pileata  
 Eucalyptus pluricaulis subsp. pluricaulis  
 Eucalyptus pluricaulis subsp. porphyrea  
 Eucalyptus pyriformis  
 Eucalyptus recta P1  
 Eucalyptus redunca

*Eucalyptus rigidula*  
*Eucalyptus salmonophloia*  
*Eucalyptus salubris*  
*Eucalyptus sargentii*  
*Eucalyptus sargentii* subsp. *sargentii*  
*Eucalyptus semivestita* ms  
*Eucalyptus sheathiana*  
*Eucalyptus spathulata* subsp. *spathulata*  
*Eucalyptus stowardii*  
*Eucalyptus subangusta* subsp. *pusilla*  
*Eucalyptus subangusta* subsp. *subangusta*  
*Eucalyptus subangusta* subsp. *virescens* P1  
*Eucalyptus vegrandis*  
*Eucalyptus wandoo* subsp. *pulverea*  
*Eucalyptus wandoo* subsp. *wandoo*  
*Eucalyptus* x *carnabyi* P4  
*Eucalyptus yilgarnensis*  
*Eutaxia microphylla*  
*Exocarpos aphyllus*  
*Exocarpos sparteus*  
*Frankenia glomerata* P1  
*Gahnia drummondii*  
 \**Galium murale*  
*Gastrolobium bennettsianum*  
*Gastrolobium callistachys* P4  
*Gastrolobium calycinum*  
*Gastrolobium floribundum*  
*Gastrolobium glaucum* R  
*Gastrolobium hamulosum* R  
*Gastrolobium parviflorum*  
*Gastrolobium rotundifolium* P1  
*Gastrolobium spinosum* var. *grandiflorum*  
*Gastrolobium spinosum* var. *spinosum*  
*Gastrolobium spinosum* var. *triangulare*  
*Gastrolobium spinosum* var. *trilobum*  
*Gastrolobium trilobum*  
*Gilberta tenuifolia*  
*Glischrocaryon aureum*  
*Glischrocaryon aureum* var. *angustifolium*  
*Glischrocaryon aureum* var. *aureum*  
*Glischrocaryon flavescens*  
*Glossostigma drummondii*  
*Gnephosis acicularis*  
*Gnephosis multiflora*  
*Gnephosis tenuissima*  
*Gompholobium aristatum*  
*Gompholobium obcordatum*  
*Gompholobium shuttleworthii*  
*Gompholobium tomentosum*  
*Gonocarpus confertifolius* var. *confertifolius*  
*Gonocarpus cordiger*  
*Gonocarpus nodulosus*  
*Goodenia berardiana*  
*Goodenia caerulea*  
*Goodenia convexa*  
*Goodenia glareicola*  
*Goodenia hassallii*  
*Goodenia helmsii*  
*Goodenia occidentalis*  
*Goodenia perryi* P1  
*Goodenia pinifolia*  
*Goodenia pinnatifida*  
*Goodenia pusilliflora* P1  
*Grevillea acuaria*  
*Grevillea apiculoba* subsp. *digitata*  
*Grevillea apiculoba* subsp. *digitata*  
*Grevillea armigera*  
*Grevillea asparagoides* P3  
*Grevillea bififormis* subsp. *biformis*  
*Grevillea bififormis* subsp. *cymbiformis* P2  
*Grevillea biternata*  
*Grevillea brachystachya*  
*Grevillea didymobotrya*  
*Grevillea didymobotrya* subsp. *didymobotrya*  
*Grevillea dryandroides*  
*Grevillea dryandroides* subsp. *dryandroides* R  
*Grevillea dryandroides* subsp. *hirsuta* R  
*Grevillea endlicheriana*  
*Grevillea eremophila*  
*Grevillea eriostachya*  
*Grevillea eryngioides*  
*Grevillea excelsior*  
*Grevillea hakeoides* subsp. *hakeoides*  
*Grevillea hakeoides* subsp. *stenophylla*  
*Grevillea haplantha* subsp. *haplantha*  
*Grevillea haplantha* subsp. *recedens*  
*Grevillea huegelii*  
*Grevillea integrifolia* subsp. *shuttleworthiana*  
*Grevillea kenneallyi* P1  
*Grevillea levis*  
*Grevillea nana* subsp. *abbreviata* P2  
*Grevillea nana* subsp. *nana*  
*Grevillea obliquistigma* subsp. *funicularis*  
*Grevillea paniculata*  
*Grevillea paradoxa*  
*Grevillea petrophiloides*  
*Grevillea pinifolia* P1  
*Grevillea pterosperma*  
*Grevillea shuttleworthiana* subsp. *shuttleworthiana*  
*Grevillea spinosissima* P3  
*Grevillea tenuiloba* P2  
*Grevillea teretifolia*  
*Grevillea umbellulata* subsp. *acerosa*  
*Grevillea umbellulata* subsp. *umbellulata*  
*Grevillea uncinulata* subsp. *uncinulata*  
*Guichenotia impudica* ms P3  
*Guichenotia macrantha*  
*Guichenotia micrantha*  
*Guichenotia sarotes*  
*Gunniopsis glabra*  
*Gunniopsis intermedia*  
*Gunniopsis rubra* P1  
*Gunniopsis septifraga*  
 \**Gynandriis setifolia*  
*Gyrostemon racemiger*  
*Gyrostemon subnudus*  
*Haemodorum discolor*  
*Hakea circumalata*  
*Hakea erecta*  
*Hakea francisiana*  
*Hakea gilbertii*  
*Hakea incrassata*  
*Hakea lissocarpha*  
*Hakea meisneriana*  
*Hakea multilineata*  
*Hakea petiolaris* subsp. *trichophylla* ms  
*Hakea platysperma*  
*Hakea scoparia*  
*Hakea trifurcata*

*Halgania anagalloides* var. *anagalloides* ms  
*Halgania integerrima*  
*Halgania lavandulacea*  
*Halgania wonganensis* ms  
*Halosarcia doleiformis*  
*Halosarcia fimbriata*  
*Halosarcia halocnemoides*  
*Halosarcia indica* subsp. *bidens*  
*Halosarcia lepidosperma*  
*Halosarcia leptoclada* subsp. *inclusa*  
*Halosarcia lylei*  
*Halosarcia peltata*  
*Halosarcia pergranulata* subsp. *pergranulata*  
*Halosarcia syncarpa*  
*Halosarcia undulata*  
*Helichrysum leucopsidum*  
*Helichrysum lindleyi*  
*Hemiandra* aff. *coccinea*  
*Hemiandra coccinea* P3  
*Hemiandra rubriflora*  
*Hemigenia conferta* P2  
*Hemigenia curvifolia* P2  
*Hemigenia dielsii*  
*Hemigenia diplanthera*  
*Hemigenia sericea*  
*Hemigenia viscida* R  
*Hemigenia westringioides*  
*Hibbertia acerosa*  
*Hibbertia crassifolia*  
*Hibbertia drummondii*  
*Hibbertia eatoniae*  
*Hibbertia enervia*  
*Hibbertia exasperata*  
*Hibbertia glomerosa*  
*Hibbertia huegelii*  
*Hibbertia hypericoides*  
*Hibbertia lividula*  
*Hibbertia nutans*  
*Hibbertia potentilliflora*  
*Hibbertia rostellata*  
*Hibbertia rupicola*  
*Homalocalyx coarctatus*  
*Homalocalyx thryptomenoides*  
 \**Hordeum glaucum*  
 \**Hordeum marinum*  
*Hyalochlamys globifera*  
*Hyalosperma cotula*  
*Hyalosperma demissum*  
*Hyalosperma glutinosum*  
*Hyalosperma glutinosum* subsp. *glutinosum*  
*Hybanthus floribundus*  
*Hybanthus floribundus* subsp. *curvifolius*  
*Hydrocotyle callicarpa*  
*Hydrocotyle diantha*  
*Hydrocotyle pilifera* var. *glabrata*  
*Hydrocotyle rugulosa*  
*Hypocalymma angustifolium*  
*Hypocalymma puniceum*  
*Hypolaena humilis* ms  
*Hypoxis occidentalis*  
*Hypoxis occidentalis* var. *occidentalis*  
*Isoetes australis*  
*Isoetes caroli*  
*Isoetopsis graminifolia*  
*Isolepis cernua*  
 \**Isolepis marginata*  
*Isopogon asper*  
*Isopogon divergens*  
*Isopogon dubius*  
*Isopogon linearis*  
*Isopogon scabriusculus* subsp. *scabriusculus*  
*Isopogon scabriusculus* subsp. *scabriusculus* ms  
*Isopogon scabriusculus* subsp. *stenophyllus* ms  
*Isotoma hypocrateriformis*  
*Isotropis cuneifolia*  
*Isotropis drummondii*  
*Isotropis juncea*  
*Jacksonia fasciculata*  
*Jacksonia foliosa*  
*Jacksonia macrocalyx*  
*Jacksonia racemosa*  
*Jacksonia restioides*  
 \**Juncus acutus*  
 \**Juncus bufonius*  
*Juncus pallidus*  
*Juncus subsecundus*  
*Kennedia prostrata*  
*Keraudrenia hermanniifolia*  
*Keraudrenia integrifolia*  
*Kunzea micrantha*  
*Kunzea praestans*  
*Kunzea pulchella*  
*Lachnostachys ferruginea*  
*Lachnostachys verbascifolia* var. *verbascifolia*  
*Lagenifera huegelii*  
 \**Lamarckia aurea*  
*Lasiopetalum drummondii*  
*Lasiopetalum floribundum*  
*Lasiopetalum molle*  
*Lawrencella rosea*  
*Laxmannia grandiflora* subsp. *grandiflora*  
*Laxmannia omnifertilis*  
*Lechenaultia* aff. *striata*  
*Lechenaultia biloba*  
*Lechenaultia floribunda*  
*Lechenaultia stenosepala*  
 \**Lepidium bonariense*  
*Lepidium phlebopetalum*  
*Lepidium pseudotasmanicum* P4  
*Lepidium rotundum*  
*Lepidobolus preissianus*  
*Lepidosperma costale*  
*Lepidosperma resinosum*  
*Lepidosperma* sp. P1 small head (M.D. Tindale 166A)  
*Lepidosperma tenue*  
*Lepilaena preissii*  
*Leporella fimbriata*  
*Leptomeria preissiana*  
*Leptosema daviesioides*  
*Leptospermum erubescens*  
*Leptospermum oligandrum*  
*Leptospermum roei*  
*Leucopogon conostephioides*  
*Leucopogon crassiflorus*  
*Leucopogon gracillimus*  
*Leucopogon hamulosus*  
*Leucopogon obtusatus*  
*Leucopogon tamminensis*  
*Leucopogon woodsii*

Levenhookia dubia  
 Levenhookia leptantha  
 Levenhookia stipitata  
 \*Limonium sinuatum  
 Lobelia gibbosa  
 Lobelia heterophylla  
 Lobelia rarifolia  
 Logania flaviflora  
 Lomandra collina  
 Lomandra effusa  
 Lomandra micrantha subsp. micrantha  
 Lotus cruentus  
 Lyginia barbata  
 Lysinema ciliatum  
 Lysinema ciliatum forma Central  
 wheatbelt(S.Paust 898)  
 Lysiosepalum abollatum ms P1  
 Lysiosepalum rugosum  
 Maireana carnosae  
 Maireana enchylaenoides  
 Maireana georgei  
 Maireana marginata  
 Malleostemon roseus  
 Mallophora globiflora  
 Mallophora rugosifolia  
 Marianthus erubescens  
 Melaleuca acerosa  
 Melaleuca acuminata subsp. websteri ms  
 Melaleuca adnata  
 Melaleuca aff. cordata  
 Melaleuca aff. pungens  
 Melaleuca aspalathoides  
 Melaleuca carrii ms  
 Melaleuca conothamnoides  
 Melaleuca cordata  
 Melaleuca coronicarpa  
 Melaleuca ctenoides  
 Melaleuca delta ms  
 Melaleuca elliptica  
 Melaleuca fulgens subsp. fulgens  
 Melaleuca halmaturorum  
 Melaleuca hamulosa  
 Melaleuca haplantha  
 \*Melaleuca lanceolata  
 \*Melaleuca lanceolata subsp. thaeroides  
 Melaleuca lateriflora subsp. lateriflora ms  
 Melaleuca laxiflora  
 Melaleuca lecanantha  
 Melaleuca leptospermoides  
 Melaleuca longistaminea subsp. longistaminea  
 ms  
 Melaleuca macronychia subsp. macronychia  
 Melaleuca oldfieldii  
 Melaleuca orbicularis ms  
 Melaleuca pentagona  
 Melaleuca platycalyx  
 Melaleuca pungens  
 Melaleuca radula  
 Melaleuca scabra  
 Melaleuca sciotostyla R  
 Melaleuca sclerophylla P3  
 Melaleuca sp.Wongan Hills(R.Davis 1959)  
 Melaleuca thyooides  
 Melaleuca uncinata  
 Melaleuca viminea  
 Menkea australis  
 Mesembryanthemum nodiflorum  
 Mesomelaena preissii  
 Microcorys eremophiloides R  
 Microcorys ericifolia  
 Microcorys obovata  
 Microcorys tenuifolia P2  
 Microcybe multiflora subsp. multiflora  
 Micromyrtus obovata  
 Micromyrtus racemosa  
 Micromyrtus racemosa var. "unsorted"  
 Micromyrtus racemosa var. latifolia ms P2  
 \*Micropterum papulosum  
 Millotia myosotidifolia  
 Millotia tenuifolia var. tenuifolia  
 Mirbelia aff. multicaulis  
 Mirbelia floribunda  
 Mirbelia ramulosa  
 Mirbelia spinosa  
 Mirbelia trichocalyx  
 Muehlenbeckia adpressa  
 Myriocephalus occidentalis  
 Nemcia hookeri  
 Nemcia obovata  
 Neurachne alopecuroidea  
 \*Nicotiana glauca  
 Nicotiana rosulata subsp. rosulata  
 Nicotiana rotundifolia  
 Nuytsia floribunda  
 Olax benthamiana  
 Olearia conspicua ms  
 Olearia dampieri subsp. eremicola ms  
 Olearia elaeophila  
 Olearia homolepis  
 Olearia muelleri  
 Olearia muricata  
 Olearia paucidentata  
 Omphalolappula concava  
 Opercularia vaginata  
 Ophioglossum lusitanicum  
 \*Orobanche minor  
 \*Osteospermum clandestinum  
 Oxalis corniculata  
 Panicum antidotale  
 \*Papaver hybridum  
 \*Parapholis incurva  
 \*Parentucellia latifolia  
 Parietaria cardiostegia  
 \*Pentaschistis airoides  
 Persoonia aff. coriacea  
 Persoonia angustiflora  
 Persoonia coriacea  
 Persoonia rufiflora  
 Persoonia saundersiana  
 Persoonia striata  
 Persoonia stricta  
 Petrophile brevifolia  
 Petrophile incurvata  
 Petrophile seminuda  
 Petrophile shuttleworthiana  
 Petrophile trifurcata ms  
 Petrophile wonganensis  
 Petrorhagia velutina  
 \*Phacelia tanacetifolia  
 Phebalium ambiguum

*Phebalium brachycalyx* P1  
*Phebalium drummondii* P1  
*Phebalium megaphyllum* ms  
*Phebalium microphyllum*  
*Phebalium tuberculosum*  
*Phebalium tuberculosum* subsp. *megaphyllum*  
*Phlegmatospermum drummondii* R  
*Phyllangium paradoxum* ms  
*Pileanthus peduncularis*  
*Pilostyles hamiltonii*  
*Pimelea aeruginosa*  
*Pimelea argentea*  
*Pimelea avonensis*  
*Pimelea brevifolia* subsp. *modesta*  
*Pimelea brevistyla* subsp. *minor*  
*Pimelea ciliata* subsp. *ciliata*  
*Pimelea imbricata*  
*Pimelea imbricata* var. *piliger*  
*Pimelea imbricata* var. *simulans*  
*Pimelea lehmanniana* subsp. *lehmanniana*  
*Pimelea sulphurea*  
*Pimelea sylvestris*  
*Pimelea villifera*  
*Pittosporum phylliraeoides*  
*Pityrodia axillaris* P1  
*Pityrodia lepidota*  
*Pityrodia teckiana*  
*Pityrodia terminalis*  
*Pityrodia terminalis* var.  
 \**Plantago coronopus* subsp. *commutata*  
*Platysace cirrosa*  
*Platysace juncea*  
*Platysace maxwellii*  
*Platysace trachymenioides*  
*Pleurosorus rutifolius*  
*Pleurosorus subglandulosus*  
*Podolepis canescens*  
*Podolepis capillaris*  
*Podolepis gracilis*  
*Podolepis lessonii*  
*Podolepis tepperi*  
*Podotheca angustifolia*  
*Podotheca gnaphalioides*  
*Podotheca pritzelii* P2  
*Pogonolepis muelleriana*  
*Pogonolepis stricta*  
 \**Polygonum bellardii*  
 \**Polypogon monspeliensis*  
*Poranthera microphylla*  
*Prasophyllum cyphochilum*  
*Prasophyllum gracile*  
*Prasophyllum sargentii*  
*Prostanthera eckersleyana*  
*Prostanthera nanophylla* P3  
*Psammomoya choretroides*  
*Pterochaeta paniculata*  
*Pterostylis aspera*  
*Pterostylis recurva*  
*Pterostylis sanguinea*  
*Ptilotus declinatus*  
*Ptilotus divaricatus* var. *divaricatus*  
*Ptilotus divaricatus* var. *divaricatus*  
*Ptilotus gaudichaudii* var. *gaudichaudii*  
*Ptilotus holosericeus*  
*Ptilotus humilis* subsp. *humilis*  
*Ptilotus obovatus* var. *obovatus*  
*Ptilotus polystachyus*  
*Ptilotus polystachyus* var. *polystachyus*  
*Ptilotus spathulatus* forma *spathulatus*  
*Ptilotus stirlingii* var. *pumilus* P1  
*Ptilotus stirlingii* var. *stirlingii*  
*Pyrorchis nigricans*  
*Quinetia urvillei*  
*Radyera farragei*  
*Ranunculus sessiliflorus* var. *sessiliflorus*  
 \**Reseda luteola*  
*Rhagodia acicularis* R  
*Rhagodia drummondii*  
*Rhagodia preissii*  
*Rhagodia preissii* subsp. *preissii*  
*Rhodanthe chlorocephala chlorocephala*  
*Rhodanthe heterantha*  
*Rhodanthe laevis*  
*Rhodanthe manglesii*  
*Rhodanthe polycephala*  
*Rhodanthe pygmaea*  
*Rhodanthe stricta*  
 \**Rostraria cristata*  
*Roycea spinescens*  
*Rulingia densiflora*  
*Ruppia polycarpa*  
 \**Sagina apetala*  
*Salsola kali*  
*Santalum acuminatum*  
*Santalum spicatum*  
*Sarcocornia quinqueflora*  
*Sarcozona praecox*  
*Scaevola glandulifera*  
*Scaevola hamiltonii*  
*Scaevola humifusa*  
*Scaevola platyphylla*  
*Scaevola pulvinaris*  
*Scaevola sericophylla*  
*Scaevola spinescens*  
 \**Schismus barbatus*  
*Schoenia cassiniana*  
*Schoenus aff. odontocarpus*  
*Schoenus armeria*  
*Schoenus caespititius*  
*Schoenus calcatus* P3  
*Schoenus clandestinus*  
*Schoenus hexandrus*  
*Schoenus nanus*  
*Schoenus pennisetis* P1  
*Schoenus sp. smooth culms*(K.R.Newbey 7823)  
*Schoenus subflavus subflavus*  
*Schoenus subflavus* subsp. *subflavus*  
*Scholtzia capitata*  
*Scholtzia drummondii*  
*Scholtzia oligandra*  
*Sclerolaena diacantha*  
*Sclerostegia moniliformis*  
*Senecio glossanthus*  
*Senecio lautus*  
*Senecio lautus* subsp. *dissectifolius*  
*Senna artemisioides* subsp. *filifolia*  
*Senna glutinosa* subsp. *charlesiana*  
*Senna pleurocarpa*  
*Sida calyxhymentia*  
 \**Silene nocturna*

Siloxerus humifusus  
 Siloxerus multiflorus  
 \*Sisymbrium irio  
 \*Sisymbrium orientale  
 \*Solanum elaeagnifolium  
 Solanum hoplopetalum  
 Solanum lasiophyllum  
 Solanum oldfieldii  
 Solanum orbiculatum subsp. orbiculatum  
 \*Sonchus oleraceus  
 Spartochloa scirpoidea  
 Spergula pentandra  
 \*Spargularia diandra  
 \*Spargularia rubra  
 Spargularia salina  
 Spiculaea ciliata  
 Stachystemon brachyphyllus  
 Stackhousia monogyne  
 Stackhousia pubescens  
 Stackhousia scoparia  
 Stenanthemum grandiflorum ms P2  
 Stenanthemum intricatum  
 Stenanthemum notiale subsp. notiale  
 Stenanthemum pomaderroides  
 Stirlingia abrotanoides  
 Stylidium breviscapum  
 Stylidium bulbiferum  
 Stylidium bulbiferum var. ciliatum  
 Stylidium bulbiferum var. septentrionale  
 Stylidium calcaratum  
 Stylidium caricifolium  
 Stylidium confluens  
 Stylidium coroniforme R  
 Stylidium crassifolium  
 Stylidium dichotomum  
 Stylidium emarginatum subsp. emarginatum  
 Stylidium leptophyllum  
 Stylidium macrocarpum  
 Stylidium neglectum P3  
 Stylidium nungarinense  
 Stylidium periscelanthum  
 Stylidium petiolare  
 Stylidium pubigerum  
 Stylidium repens  
 Stylidium udusicola  
 Stylobasium australe  
 Stypandra glauca  
 Synaphea constricta P3  
 Synaphea interioris  
 Synaphea spinulosa  
 Synaphea spinulosa subsp. major ms  
 Synaphea spinulosa subsp. spinulosa  
 Templetonia aculeata  
 Templetonia smithiana  
 Templetonia sulcata  
 Tetratheca confertifolia  
 Tetratheca retrorsa P3  
 Tetratheca virgata  
 Teucrium sessiliflorum  
 Thelymitra antennifera  
 Thelymitra azurea  
 Thelymitra sargentii  
 Thelymitra spiralis  
 Thelymitra villosa  
 Thomasia foliosa  
 Thomasia rugosa  
 Thomasia tenuivesta  
 Thomasia tenuivestita P1  
 Thomasia tremandroides  
 Thryptomene ? prolifera  
 Thryptomene aspera subsp. Paynes  
 Find(C.A.Gardner 11996)  
 Thryptomene australis  
 Thryptomene denticulata  
 Thryptomene kochii  
 Thryptomene prolifera  
 Thryptomene racemulosa  
 Thyridolepis multiculmis  
 Thysanotus aff. patersonii  
 Thysanotus asper  
 Thysanotus brittanii ms  
 Thysanotus dichotomus  
 Thysanotus manglesianus  
 Thysanotus patersonii  
 Thysanotus rectantherus  
 Thysanotus sparteus  
 Thysanotus speckii  
 Thysanotus teretifolius  
 Trachymene cyanopetala  
 Trachymene ornata  
 Tragus australianus  
 Tribonanthes australis  
 Tribonanthes longipetala  
 Tribonanthes violacea  
 \*Tribulus terrestris  
 Tricoryne arenicola ms P2  
 Tricoryne humilis  
 Tricoryne tenella  
 \*Trifolium arvense var. arvense  
 Trifolium cherleri  
 Triglochin aff. calcitrapum  
 Triglochin calcitrapum subsp. calcitrapum ms  
 Triglochin calcitrapum subsp. incurvum ms  
 Triglochin centrocarpum  
 Triglochin minutissimum  
 Triglochin mucronatum  
 Triglochin sp.A Perth Flora(A.S.George 4100)  
 Triodia danthonioides  
 Triodia longipalea  
 Tripterococcus brunonis  
 Trymalium daphnifolium  
 Typha domingensis  
 Urodon capitatus  
 \*Urospermum picroides  
 Utricularia tenella  
 Velleia cynopotamica  
 Velleia discophora  
 Verreauxia reinwardtii  
 Verticordia acerosa var. preissii  
 Verticordia auriculata  
 Verticordia brachypoda  
 Verticordia chrysantha  
 Verticordia chrysanthella  
 Verticordia densiflora var. cespitosa  
 Verticordia densiflora var. densiflora  
 Verticordia eriocephala  
 Verticordia huegelii var. tridens P1  
 Verticordia insignis subsp. compta  
 \*Verticordia monadelpha var. monadelpha  
 Verticordia pennigera



*Verticordia picta*  
*Verticordia pritzelii*  
*Verticordia rennieana*  
*Verticordia serrata* var. *ciliata*  
*Verticordia staminosa* subsp. *staminosa* R  
*Verticordia tumida* subsp. *therogana*  
*Verticordia venusta* P3  
*Verticordia wonganensis* P3  
*Vittadinia humerata*  
\**Vulpia myuros*  
*Wahlenbergia gracilentia*  
*Waitzia acuminata* var. *acuminata*  
*Waitzia nitida*

*Westringia cephalantha*  
*Westringia rigida*  
*Wilsonia humilis*  
*Wurmbea dioica* subsp. *alba*  
*Wurmbea drummondii* P4  
*Wurmbea graniticola*  
*Wurmbea pygmaea*  
*Wurmbea tenella*  
*Xanthosia bungei*  
*Xylomelum angustifolium*  
\**Zaluzianskya divaricata*  
*Zygophyllum ovatum*  
*Zygophyllum simile*

# Appendix

## 5

## APPENDIX 5

Fauna species in the Shire of Wongan-Ballidu (source- W.A Museum)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates -  
30.4500, 116.4333 and -31.000, 117.2333.

**Note-** not a comprehensive list.

\* represents an introduced species.

BIRD SPECIES
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### Acanthizidae

*Acanthiza apicalis*  
*Acanthiza chrysorrhoa*  
*Acanthiza uropygialis*  
*Calamanthus campestris*  
*Hylacola cauta*  
*Pyrrholaemus brunneus*  
*Sericornis frontalis maculatus*  
*Smicrornis brevirostris*

### Accipitridae

*Aquila audax*

### Artamidae

*Artamus cyanopterus*

### Caprimulgidae

*Eurostopodus argus*

### Charadriidae

*Charadrius rubricollis*

### Cinclosomatidae

*Cinclosoma castanotus*

### Climacteridae

*Climacteris rufa*

### Columbidae

*Phaps elegans*

### Cracticidae

*Cracticus torquatus*

### Cuculidae

*Cacomantis flabelliformis flabelliformis*  
*Chrysococcyx osculans*

### Dicaeidae

*Dicaeum hirundinaceum*

### Hirundinidae

*Cheramoeca leucosternus*

### Maluridae

*Malurus lamberti*  
*Malurus leucopterus*  
*Malurus leucopterus leuconotus*

*Malurus pulcherrimus*  
*Stipiturus malachurus westernensis*

**Megapodiidae**

*Leipoa ocellata*

**Meliphagidae**

*Anthochaera carunculata*  
*Lichenostomus leucotis novaenorcae*  
*Lichenostomus ornatus*  
*Lichenostomus virescens*  
*Lichmera indistincta indistincta*  
*Manorina flavigula*  
*Melithreptus brevirostris leucogenys*  
*Phylidonyris albifrons*  
*Phylidonyris melanops*

**Neosittidae**

*Daphoenositta chrysoptera*  
*Daphoenositta chrysoptera pileata*

**Pachycephalidae**

*Colluricincla harmonica*  
*Pachycephala pectoralis fuliginosa*  
*Pachycephala rufiventris rufiventris*

**Pardalotidae**

*Pardalotus striatus*  
*Pardalotus striatus westraliensis*

**Petroicidae**

*Drymodes brunneopygia*  
*Eopsaltria australis griseogularis*  
*Eopsaltria georgiana*  
*Microeca fascinans assimilis*  
*Petroica goodenovii*

**Pomatostomidae**

*Pomatostomus superciliosus*

**Psittacidae**

*Cacatua pastinator butleri*  
*Calyptorhynchus latirostris*  
*Glossopsitta porphyrocephala*  
*Neophema elegans*  
*Pezoporus wallicus flaviventris*  
*Platycercus icterotis*  
*Platycercus icterotis icterotis*  
*Platycercus zonarius*  
*Polytelis anthoepus anthoepus*

**Recurvirostridae**

*Cladorhynchus leucocephalus*

**Strigidae**

*Ninox novaeseelandiae*  
*Ninox novaeseelandiae boobook*

**Threskiornithidae**

*Threskiornis spinicollis*

**Turnicidae**

*Turnix varia varia*

**Tytonidae**

*Tyto alba*  
*Tyto alba delicatula*

MAMMAL SPECIES

**Burramyidae**

*Cercartetus concinnus*

**Dasyuridae**

*Phascogale tapoatafa tapoatafa*  
*Sminthopsis crassicaudata*  
*Sminthopsis dolichura*

**Macropodidae**

*Macropus fuliginosus*  
*Macropus robustus erubescens*

**Molossidae**

*Mormopterus planiceps*  
*Tadarida australis*

**Muridae**

\**Mus musculus*  
*Pseudomys albocinereus*

**Vespertilionidae**

*Chalinolobus gouldii*  
*Nyctophilus geoffroyi*  
*Scotorepens balstoni*  
*Vespadelus regulus*

REPTILE SPECIES

**Agamidae**

*Ctenophorus cristatus*  
*Ctenophorus maculatus griseus*  
*Ctenophorus ornatus*  
*Ctenophorus reticulatus*  
*Ctenophorus scutulatus*  
*Moloch horridus*  
*Pogona minor*  
*Pogona minor minor*

**Boidae**

*Aspidites ramsayi*

**Elapidae**

*Brachyuropis semifasciata*  
*Demansia psammophis reticulata*  
*Pseudechis australis*  
*Pseudonaja affinis affinis*  
*Pseudonaja modesta*  
*Pseudonaja nuchalis*  
*Simoselaps bertholdi*  
*Suta fasciata*

**Gekkonidae**

*Crenadactylus ocellatus ocellatus*  
*Diplodactylus granariensis*

*Diplodactylus granariensis granariensis*  
*Diplodactylus pulcher*  
*Diplodactylus sp*  
*Diplodactylus spinigerus*  
*Gehyra variegata*  
*Heteronotia binoei*  
*Oedura reticulata*  
*Underwoodisaurus milii*

**Pygopodidae**

*Aprasia repens*  
*Delma australis*  
*Delma fraseri fraseri*  
*Gehyra variegata*  
*Lialis burtonis*  
*Pygopus lepidopodus*

**Scincidae**

*Cryptoblepharus plagiocephalus*  
*Ctenotus pantherinus pantherinus*  
*Ctenotus schomburgkii*  
*Egernia stokesii badia*  
*Lerista macropisthopus macropisthopus*  
*Lerista muelleri*  
*Menetia greyii*  
*Morethia butleri*  
*Tiliqua occipitalis*  
*Tiliqua rugosa rugosa*

**Typhlopidae**

*Ramphotyphlops australis*  
*Ramphotyphlops waitii*

**Varanidae**

*Varanus gouldii*

AMPHIBIA SPECIES
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**Myobatrachidae**

*Crinia pseudinsignifera*  
*Heleioporus albopunctatus*  
*Heleioporus eyrei*  
*Limnodynastes dorsalis*  
*Neobatrachus kunapalari*  
*Neobatrachus pelobatoides*  
*Neobatrachus sp*  
*Neobatrachus sutor*  
*Pseudophryne guentheri*

# Appendix

## 6



## ROADSIDE CONSERVATION COMMITTEE

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

#### Preamble

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

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

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

In some instances the Roadside Conservation Committee (RCC) is supportive of the sustainable harvesting of flora, such as salvage (removal of dead material that is not significant wildlife habitat or is material to be destroyed by road works), or the selective collection of seed for revegetation. However, each case should be viewed on its merits and any decision to facilitate harvesting from roadsides should be referred to the Department of 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 has the effect of requiring a person to only take (cut or remove) native flora from Crown land under a licence.



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

There are two types of licences that apply to the taking of protected flora from Crown land - Commercial Purposes Licences where the flora is being taken for any commercial purpose, and Scientific or Other Prescribed Purposes Licences where the protected flora is being taken for specific non-commercial purposes.

These licences are issued by CALM. 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 land manager for which the application relates to determine the potential impact of the activity, and how the activity relates to the management objectives being applied to that land.

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

### **Commercial Wildflower Harvesting**

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

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

Wildflower harvesting in many instances detracts from the biodiversity and tourism values of the roadside. It is often the case that flora is harvested from roadsides because of the convenience of access, and harvesters should be directed to find alternative locations.

There are situations where some harvesting may be considered, such as in very wide road reserves where the activity can be screened from road users, but mostly road managers have been discouraged from supporting or allowing such harvesting to occur. If harvesting is to be approved, then the points provided at the end of these guidelines should be considered.

### **Seed Collection**

Throughout much of the south west, revegetation of the native flora is being undertaken to redress the problems that historic clearing has created. Increasingly, this revegetation is aimed at using local native flora so as to recreate the native vegetation to support biodiversity objectives. The paradox is that in many areas the native vegetation has been

cleared to such an extent that adequate sources of native seed cannot be found for undertaking this work. Roadside vegetation may be a source of such seed.

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

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

When seed is needed for *bona fide* revegetation projects within the local community, and no other source of local seed is available, then the controlling authority may consider giving permission for collection of seed from roadsides. Such collection must be under the appropriate licence issued by 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 craftwood. Due to the ease of access, timber harvesters may wish to source timber from roadside vegetation for these purposes.

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

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

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

## Guidelines For Harvesting On Roadsides

- ✓ In all cases the permission of the managing authority, i.e. Main Roads WA, Local Government or 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.
- ✓ 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 can not 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 Special Environmental Area.
- ✓ Flora harvesting should be prohibited from designated Flora Roads.
- ✓ Care should be taken that access to Dieback infected areas is limited to the drier months of the year, and vehicular access disallowed.
- ✓ Safety should always be of prime concern and every effort should be made to ensure that personal safety is a key consideration in any harvesting operation.
- ✓ Flora harvesters should not operate from the road side in areas where the vegetation is close to the road, where vehicles can not be safely parked off the road, or where there is poor driver visibility.

# Appendix

## 7



## ROADSIDE CONSERVATION COMMITTEE

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### Guidelines for the Nomination and Management of Flora Roads

#### Introduction

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

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



#### Principle Conservation Values of Flora Roads:

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

#### Identification and Nomination of Flora Roads

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

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

A road may be nominated as a Flora Road by submitting a written request to the RCC.

The RCC requires the following information:

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

The following information would also be useful:

A survey of the roadside conservation values in the Shire of Wongan-Ballidu

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

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

### **Establishment of a Flora Road**

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

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

### **Management Implications**

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

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

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

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

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

### **Tourism Implications**

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

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

### **Flora Road Register**

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

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



**Flora Roads highlight the value of the roadside vegetation present, alerting both travellers and those working in the road reserve of the high conservation values present.**

Photo D. Lamont