

Roadside Vegetation and Conservation Values in the Shire of Goomalling



Photo by V. Slater

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Roadside Conservation Committee



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Executive Summary

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

Aware of the need to conserve roadside remnants, the Shire of Goomalling, local community members and Goomalling Landcare liaised with the Roadside Conservation Committee (RCC) in 2005 to survey roadsides in their Shire. Surveys to assess the conservation values of roadside remnants were conducted between October and November 2005. The majority, 92.7%, of the Shire's 688.5 km of roadsides were assessed by the RCC for their conservation status and maps were produced via a Geographic Information System (GIS). Roadside locations of six nominated weeds and salt affected roadsides were also recorded and mapped onto separate clear overlays.

The results of the survey indicated that high conservation value roadsides covered 35.1% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 24.3%. Medium-low and low conservation value roadsides occupied 29.6% and 11.0%, respectively. A more detailed analysis of results is presented in Part C of this report.

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

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

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

PART A

OVERVIEW OF

ROADSIDE

CONSERVATION

1.0 Why is Roadside Vegetation Important?

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

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

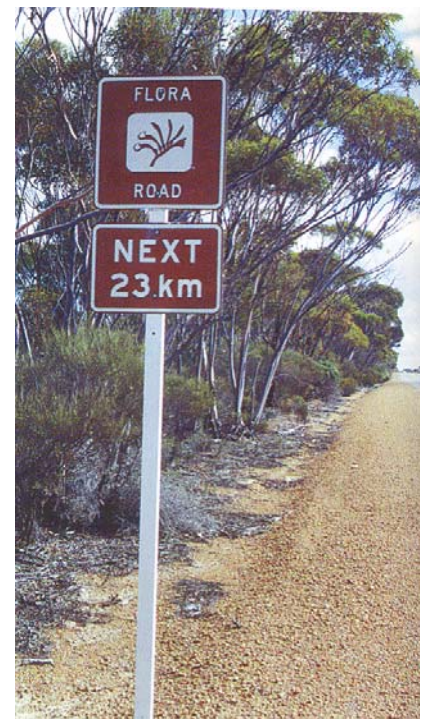
Other important values of transport corridor remnants are that they:

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



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

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



Flora Roads are high conservation value roadside remnants.

Photo D. Lamont.

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

2.0 What are the Threats?

2.1 Lack of Awareness

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

2.2 Roadside Clearing

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

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

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

2.3 Fire

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

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

The RCC's policy on fire management is:

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

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

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



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

Photo D. Lamont

2.4 Weeds

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

Once weeds become established in an area, they become a long-term management issue, costing considerable resources to control or eradicate. The WA Herbarium records 7 weed species in the Shire of Goomalling (Appendix 4). The roadside survey recorded populations of seven significant weeds, and their locations were mapped by the RCC onto clear overlays. The seven nominated weeds were:

- Paterson's Curse (*Echium plantagineum*);
- Couch (*Cynodon dactylon*);
- Wild Radish (*Raphanus raphanistrum*);
- Afghan thistle (*Solanum hystrix*);
- Cape Tulip (*Moraea flaccida* and *Moraea miniata*);
- African Lovegrass (*Eragrostis curvula*); and
- Wild Oats (*Avena fatua*).

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



Couch (*Cynodon dactylon*) is an invasive grass species found along roadsides in the Shire of Goomalling



Echium plantagineum

Photos: R. Knox & J. Dodds

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



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

Photo by K. Jackson RCC

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

Survey of Roadside Conservation Values in the Shire of Goomalling



Avena fatua Photo: J.D. Dodd

Wild oats is an annual grass like exotic weed species found along roadsides in the Shire of Goomalling

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



Eragrostis curvula

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

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



Moraea flaccida Photos: R. Knox & K.C. Richardson

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

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

2.5 Salinity

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

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

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

Table 1. Road lengths potentially affected by salinity in the Shires of Dowerin, Cunderdin, Goomalling, Northam, Toodyay, Victoria Plains and Wongan-Ballidu.

Shire	Total road length assessed (km)	Roads potentially affected by salinity - length in km					
		Highways	Local roads	Main roads	Other roads	Total affected	% of total potentially affected
Dowerin	831.41		39.83	1.75	15.33	56.90	6.84
Cunderdin	797.55	4.63	38.28		15.65	58.55	7.34
Goomalling	1,372.75		56.15	6.28	50.03	112.45	8.19%
Northam	23.97		0.38		0.55	0.93	3.86
Toodyay	581.79		4.80	0.83	3.18	8.80	1.51
Victoria Plains	917.73	1.38	46.73	3.05	26.03	77.18	8.41
Wongan-Ballidu	1,396.91		127.10	5.78	42.85	175.73	12.58

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

3.0 Legislative Requirements

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

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

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

State legislation:

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

Commonwealth legislation:

- *Environment Protection and Biodiversity Conservation Act 1999*

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

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

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

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

4.0 Environmentally Sensitive Areas

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

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

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

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

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



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

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

5.0 Flora Roads

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



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

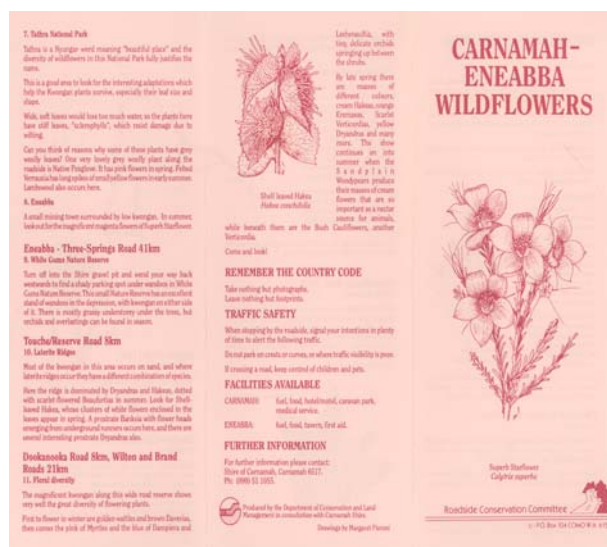
Although presently there are no Flora Roads designated within the Shire of Goomalling, the roadside survey and the RCV map highlighted a number of roadsides that have the potential to be declared as Flora Roads. These and other roads may be investigated further to see if they warrant a declaration as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

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

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

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

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



PART B

THE NATURAL ENVIRONMENT IN GOOMALLING

1.0 Flora

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

The WA Herbarium has recorded over 90 species of native plants from the Shire of Goomalling. The most prolific genera are *Verticordia* 5 spp, *Acacia* 6 spp, *Eucalyptus* 6 spp and *Melaleuca* 7 spp. The complete list of recorded flora can be seen in Appendix 4 of this report.

2.0 Declared Rare Flora (DRF)

Declared Rare Flora (DRF) species, or populations, are of great conservation significance and should therefore be treated with special care when road and utility service, construction or maintenance is undertaken. Populations

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



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



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

Photo K. Jackson.

Currently (as at January 2006), 9 locations of declared rare and priority flora are known to occur within roadsides in the Shire of Goomalling. All of these sites occur in roadsides vested in the Shire of Goomalling. In total, there are two species of Declared Rare Flora (DRF) and one species of Priority Flora that occur in these roadside locations in the Shire, these are:

Declared rare Flora

- *Daviesia euphorbioides*
- *Acacia ataxiphylla* subsp. *magna*

Priority Flora

- *Eucalyptus macrocarpa* x *pyriformis*

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



Daviesia euphorbioides

Photos: S.D. Hopper

***Daviesia euphorbioides* (Wongan cactus) is Critically Endangered. Present on the roadsides in the Shire of Goomalling, flowering September to October to December.**

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

3.0 Fauna

The Western Australian Museum records approximately 36 species of fauna from the Goomalling area (Appendix 5). WA Museum fauna records comprise specimen records, museum collections and observations from 1850 to present and therefore it is intended to act only as a general representation of the fauna in the area. Of the fauna species recorded in the Goomalling area, there were 14 bird, 2 amphibia, 4 mammal, 1 fish and 15 reptile species.



The Reticulated Velvet Gecko can be found in Dowerin

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

connection in some areas.

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

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

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

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

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

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

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



The Bilby, once found throughout most of Western Australia south of the Kimberley, is now confined to sparse desert populations in the eastern Pilbara and south to Warburton

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

- **Australian Painted Snipe (*Rostratula benghalensis australis*)**

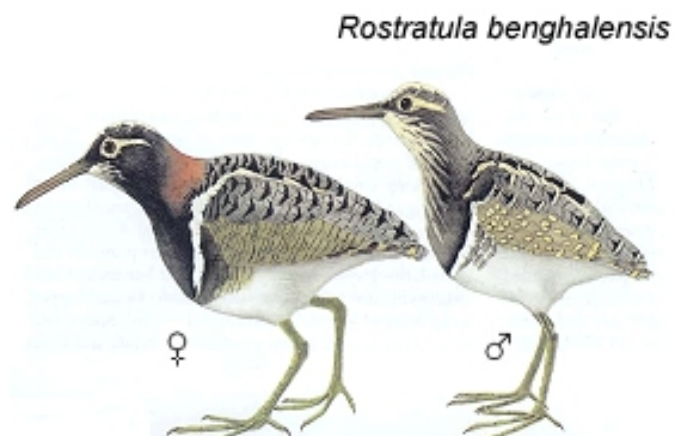
Considered vulnerable this species is a rare summer visitor to the watered areas of the north-west and swamps on the Swan Coastal Plain.

- **Pig – footed Bandicoot (*Chaeropus ecaudatus*)**

This species is presumed extinct.

- **Shield - backed Trapdoor Spider (*Idiosoma nigrum*)**

This species is in decline in its patchy distribution through the northern and central wheatbelt and coastal plain. It is a long-lived species that is very sensitive to disturbance.



Michael J. Bamford

The Australian Painted Snipe (*Rostratula benghalensis australis*) inhabits swamps throughout much of Australia and has been recorded in the Shire of Goomalling.

4.0 Remnant Vegetation Cover

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

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

Shire	Total Area (ha)	Area Inside Ag. Clearing Line (ha)	Vegetation Cover Remaining (inside agricultural clearing line)	
			(ha)	(%)
Dowerin	188,786	188,786	8,055	4.3
Cunderdin	188,696	188,696	3,312	1.8
Goomalling	185,768	185,768	8,559	4.6
Northam	141,410	141,410	31,229	22.1
Toodyay	173,440	173,440	88,082	50.8
Victoria Plains	255,291	255,291	34,787	13.6

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



Remnant roadside vegetation connects the landscape.

Photo by Main Roads WA



Tree hollows are of vital importance to breeding birds.

Photo by L. McMahon, Birds Australia

PART C

ROADSIDE

SURVEYS IN THE

SHIRE OF

GOOMALLING

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 (638.41 km, or 92.7%) of the Shire of Goomalling's 688.5 km of roads were surveyed and then assessed to determine the conservation status of the road reserves. Fieldwork was carried out throughout the months of October and November 2005. The enthusiastic effort of the roadside surveyors, Landcare Coordinator Vanessa Malcolm and the support provided by Goomalling Shire Council ensured that this project was successfully completed. The roadside surveyors were:

- Robert Boase
- Beth Boase
- Margaret Davey
- Marilyn Chester
- Katie Chester
- Vanessa Malcolm

1.1 Methods


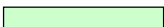

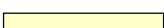
Roadside surveys are undertaken in a vehicle, generally with two people per vehicle. The passenger records the roadside attributes using the RCC's iPAQ hand-held personal computers. At the end of the survey, the iPAQs are returned to the RCC, where the survey information is analysed and mapped.

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

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

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

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

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

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

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

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

1.2 Mapping Roadside Conservation Values

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

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

1.3 Roadside Conservation Value Categories

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

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



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

Photo K. Jackson.

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

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



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

Photo RCC.

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

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



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

Photo by RCC

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

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



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

Photo by K. Jackson.

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

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



Weed control along a roadside.
Photo MRWA



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



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



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

3.0 RESULTS

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

Summary Information: Shire of Goomalling 2005					
Length of roadsides surveyed: 1,276.82 km (638.41 km of road)					
<u>Roadside Conservation Status</u>			<u>Roadside Conservation Values</u>		
	Total (km)	(%)	Score	Total (km)	(%)
High (9-12)	448.1	35.1	0	2.2	0.2
Medium-high (7-8)	310.5	24.3	1	11.2	0.9
Medium-low (5-6)	378.0	29.6	2	138.9	10.9
Low (0-4)	140.3	11.0	3	115.5	9.0
			4	180.3	14.1
Total	1276.8	100.0	5	169.1	13.2
			6	141.4	11.1
			7	149.3	11.7
			8	228.7	17.9
			9	63.0	4.9
			10	42.4	3.3
			11	26.0	2.0
			12	8.9	0.7
			Total	1276.8	100.0
<u>Native Vegetation in Roadsides</u>			<u>Width of Vegetated Roadside</u>		
	Total (km)	(%)		Total (km)	(%)
2-3 vegetation layers	546.5	42.8	1 to 5 m	1168.0	91.5
1 vegetation layer	550.4	43.1	5 to 20 m	32.8	2.6
0 vegetation layers	180.0	14.1	Over 20 m	10.1	0.8
			Unknown	66.0	5.2
Total	1276.8	100.0	Total	1276.8	100.0
<u>Number of Native Plant Species</u>			<u>Extent of Native Vegetation</u>		
	Total (km)	(%)		Total (km)	(%)
Over 20 species	63.5	5.0	Over 80%	76.3	6.0
6 to 19 species	538.7	42.2	20% to 80%	577.9	45.3
0 to 5 species	674.7	52.8	Less than 20%	622.6	48.8
			Total	1276.8	100.0
Total	1276.8	100.0	<u>Value as a Biological Corridor</u>		
<u>Predominant Adjoining Land Use</u>				Total (km)	(%)
	Total (km)	(%)	High	286.4	22.4
Agricultural: completely cleared	895.2	70.1	Medium	462.1	36.2
Agricultural: scattered vegetation	231.8	18.2	Low	528.4	41.4
Uncleared native vegetation	106.3	8.3	Total	1276.8	100.0
Drain	0.5	0.0			
Plantation of non-natives	9.0	0.7			
Railway	0.8	0.1			
Urban or Industrial	4.5	0.4			
Other	28.7	2.2			
Total	1276.8	100.0			
<u>Weed Infestation</u>					
	Total (km)	(%)			
Light <20% weeds	266.7	20.9			
Medium 20-80% weeds	645.9	50.6			
Heavy >80% weeds	364.2	28.5			
Total	1276.8	100.0			

Roadside surveys were carried out in Goomalling Shire in October and November 2005

Width of Road Reserve

The width of road reserves in the Shire of Goomalling was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 600.61km (94.1%) of roads falling into this category. Of the remaining roads, 29.8km (4.7%) were 40 metres in width and 8.0km (1.3%) of road reserves were 60 meters wide.

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

	Total km	%
20 m	600.61	94.1
40 m	29.8	4.7
60 m	8	1.3
Total	638.4	100.0

Width of Vegetated Road Reserve

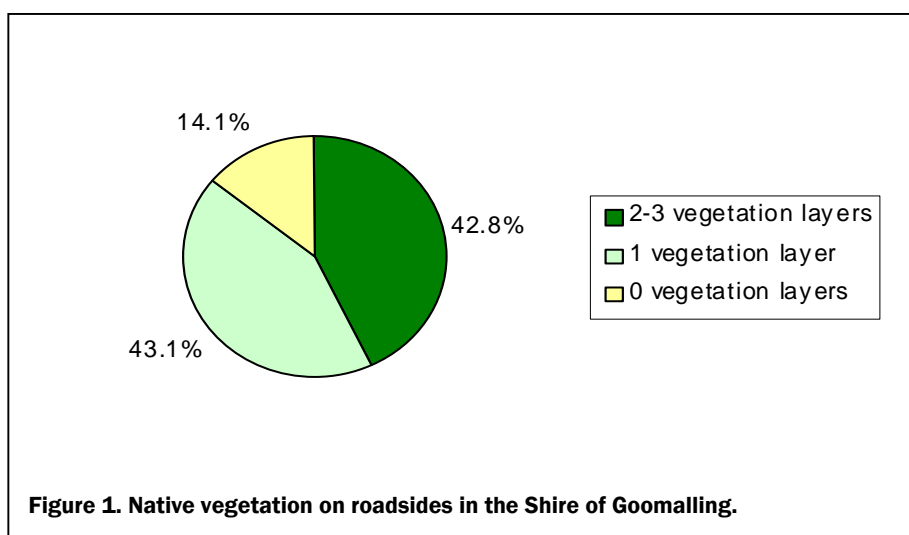
The width of vegetated roadside was recorded by selecting one of three categories, 1-5 metres, 5-20 metres or over 20 metres in width. The left and right hand sides were recorded independently, and then combined to establish the total figures (Table 5). The majority of roadside vegetation, 1185.8km (92.9%), was between 1 to 5 metres in width, followed by 33.6km (2.6%) of roadsides where the width of vegetation fell between 5 to 20 metres in width. Roadside vegetation over 20 metres in width spanned 10.1km (0.8%) of the roadsides surveyed, whilst the width was unknown for 47.4km (3.7%) of the roadsides surveyed.

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

	Total km	%
1-5 m	1185.8	92.9
5-20 m	33.6	2.6
Over 20 m	10.1	0.8
Unknown	47.4	3.7
Total	1276.8	100.00

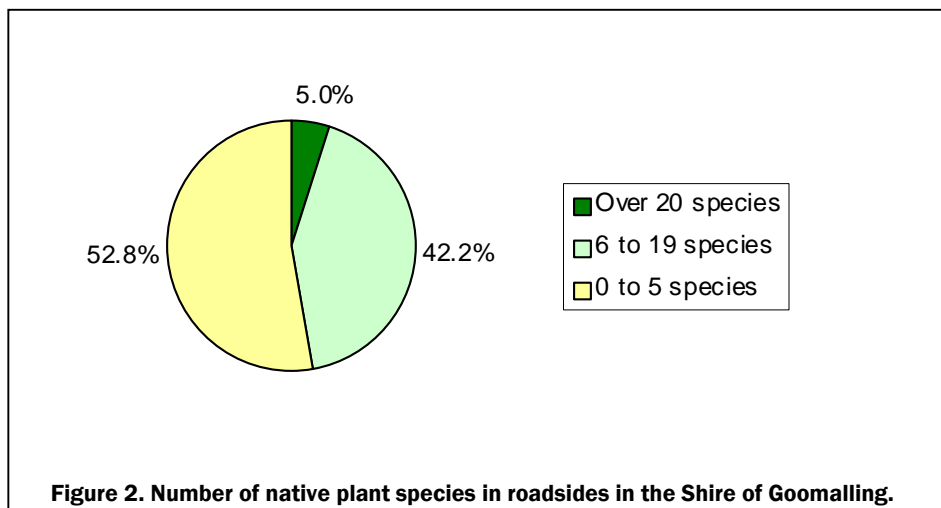
Native Vegetation on Roadsides

The number of native vegetation layers present, i.e. tree, shrub and/or ground layers, determined the 'native vegetation on roadside' value. Sections with two to three layers of native vegetation covered 42.80% of roadsides (546.5km), 43.1% (550.4km) of roadsides had only one layer and 14.1% (1810.0km) had no layers of native vegetation (Table 3 and Figure 1).



Number of Native Plant Species

The 'number of native plant species' score provided a measure of the diversity of the roadside vegetation. Survey sections with over 20 plant species spanned 5.0% (63.0km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 42.2% (538.7km) of the roadside. Over half of the roadsides,



52.8.6% (674.7km) contained less than 5 plant species (Table 3 and Figure 2).

Extent of Native Vegetation

The 'extent of native vegetation' cover refers to the continuity of the roadside vegetation and takes into account the presence of disturbances such as weeds. Roadsides with extensive vegetation cover, i.e. greater than 80%, occurred along 6.0% (76.3km) of the roadsides surveyed. Survey sections with medium vegetation cover, i.e. 20% to 80%, accounted for 45.3% (577.9km) of the roadsides. The remaining 48.8% (622.6km) had less than 20% native vegetation and therefore a low 'extent of native vegetation' value (Table 3 and

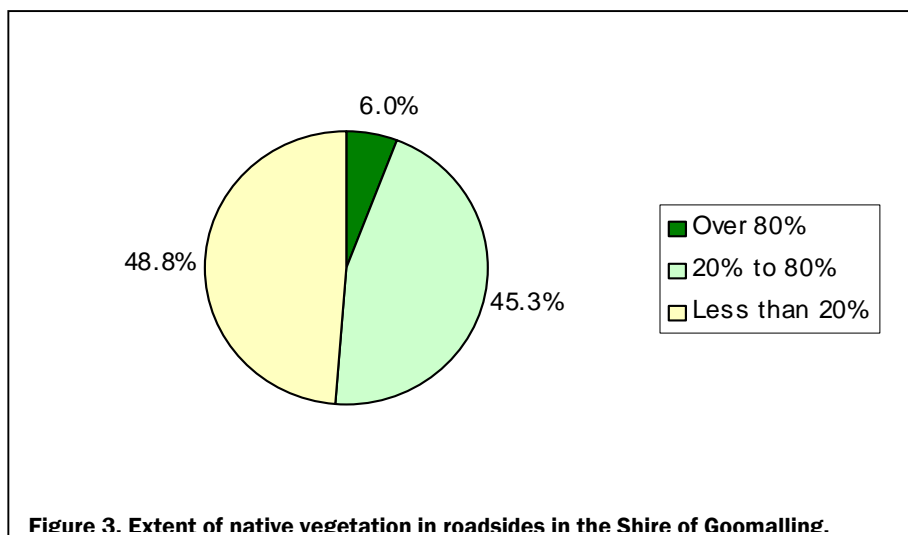
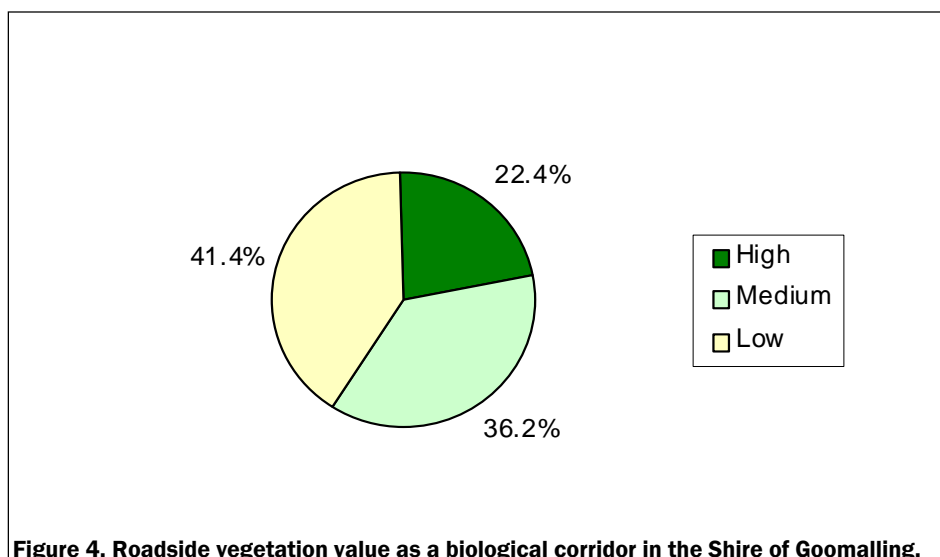


Figure 3).

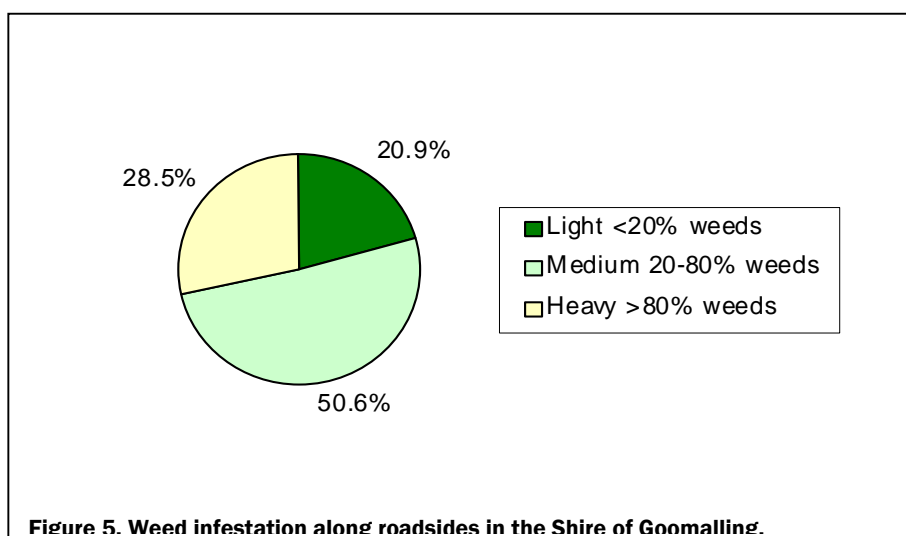
Value as a Biological Corridor

This characteristic considered the presence of four attributes: connection of uncleared areas; presence of flowering shrubs; presence of large trees with hollows; and presence of hollow logs. Roadsides determined to have high value as a biological corridor were present along 22.4% (286.4km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 36.2% (462.1km), and roadsides with low value as a biological corridor occurred along 41.4% (528.4km) of the roadsides surveyed (Table 3 and Figure 4).



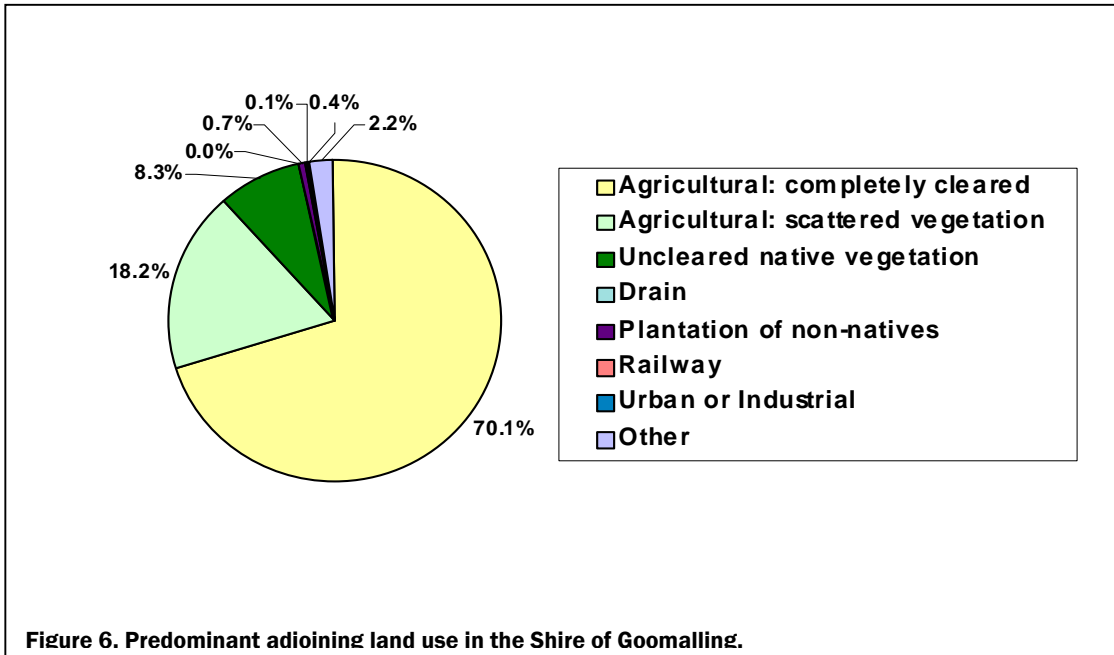
Weed Infestation

Light levels of weed infestation (weeds comprising less than 20% of total plants), were recorded on 20.9% (266.7km) of the roadsides surveyed, medium level weed infestation (weeds comprising 20-80% of the total plants) occurred on 50.6% (645.9km) of the roadsides and 28.5% of roadsides (364.2km) were heavily infested with weeds (weeds comprising more than 80% of the total plants) (Table 3 and Figure 5).



Predominant Adjoining Land Use

Uncleared native vegetation was present on 8.3% (106.3km) of the land adjoining roadsides, whilst 70.1% (895.2km) of roadsides adjoined land that had been completely cleared for agriculture. Land cleared for agriculture, containing a scattered distribution of native vegetation comprised 18.2% (231.8km) of the roadsides. Railway reserves adjoined 0.1% (0.8km) of the roadsides, urban or industrial land uses adjoined 0.4% (4.5km), and other land uses were found on 2.2% (28.7km) of the roadsides (Table 3 and Figure 6).



Nominated Weeds

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

- Paterson's Curse (*Echium plantagineum*);
- Couch (*Cynodon dactylon*);
- Wild Radish (*Raphanus raphanistrum*);
- Afghan thistle (*Solanum hystrix*);
- Cape Tulip (*Moraea flaccida* and *Moraea miniata*);
- African Lovegrass (*Eragrostis curvula*); and
- Wild Oats (*Avena fatua*).

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

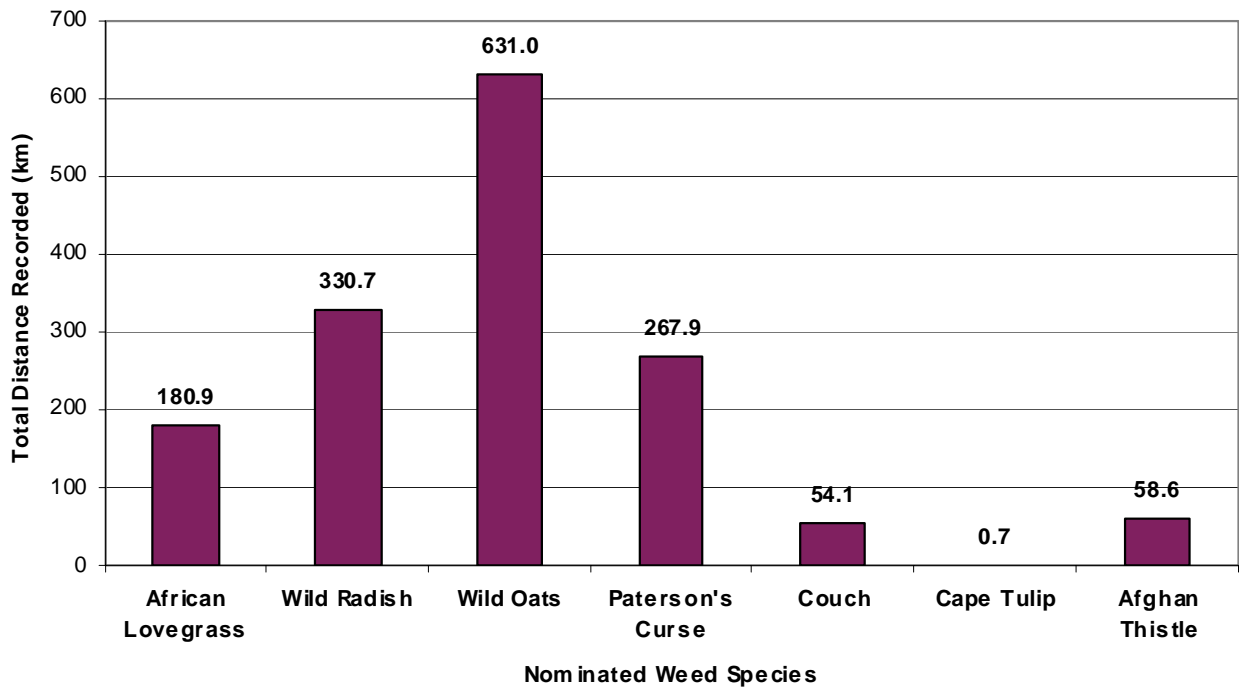
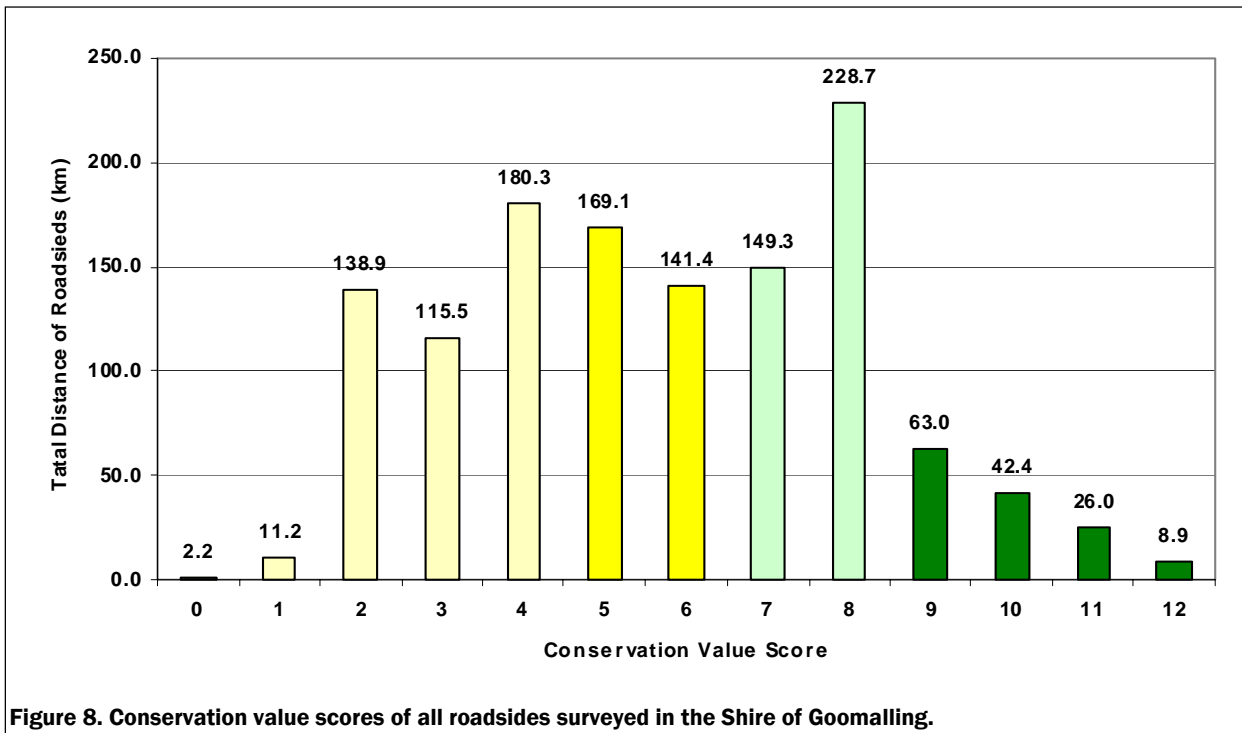


Figure 7. Presence of nominated weed groups along roads in the Shire of Goomalling.

Of the nominated weeds species, Wild Oats was the most prevalent, recorded along 631.0km of the roads surveyed. The next most commonly recorded weeds were Wild Radish, recorded along 330.7km of roads, and Paterson's Curse, recorded along 267.9km of roads. African Lovegrass was the next most commonly recorded weed, occurring along 180.9km of roads, then Afghan Thistle, recorded along 58.6km of roads , followed by Couch, recorded along 54.1km of roads and Cape Tulip was recorded along 0.7km (Figure 7).

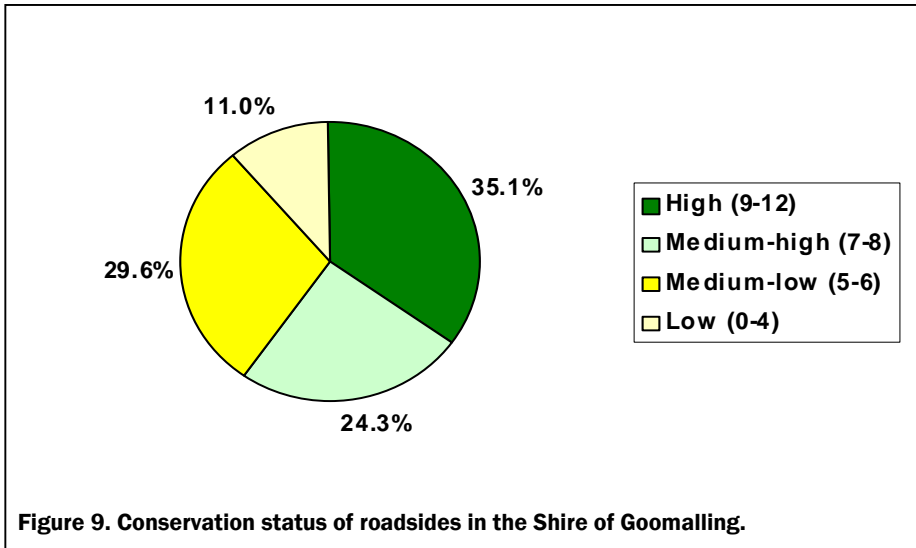
Conservation Value Scores

Conservation value scores were calculated for each section of roadside surveyed. Scores range from 0 to 12, from lowest to highest conservation value respectively (Figure 8). The most occurring roadside conservation value score was 8, with 228.7km of roadsides recording this score. Following this, 180.3km of roadsides recorded a score of 4, 169.1km recorded a score of 5 and 149.3km recorded a score of 7. Roadsides with a score of 6 covered 141.4km, a score of 2 covered 138.9km, and roadsides with a score of 3 spanned 115.5km. Roadsides with a score of 9 spanned 63.0km, a score of 10 spanned 42.4km, roadsides scoring 11 covered 26.0km, a score of 1 spanned 11.2km, a score of 12 covered 8.9km, and 2.2km of roadsides scored 0.



Conservation Status

The conservation status category indicates the combined conservation value of roadsides surveyed in the Shire of Goomalling. Roadside sections of high conservation value covered 35.1% (448.1km) of the roadsides surveyed. Medium-high conservation value roadsides accounted for 24.3% of the total surveyed (310.5km), medium-low conservation roadside covered 29.6% (378.0km) of the total roadsides surveyed. Roadsides of low conservation value occupied 11.0% (140.3km) of the roadsides surveyed (Table 3 and Figure 9).



Flora Roads

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

Although presently there are no Flora Roads designated within the Shire of Goomalling, the roadside survey and the 2006 RCV map highlighted a number of roadsides that have the potential to be declared as Flora Roads. Roadsides, or large sections of roadsides, determined as having high conservation value in the Shire of Goomalling include:

- Botherling East Road
- Oak Park Road (Northern end)
- Goongooning Road
- Berring Road (Southern end)
- Kidd Road
- Lord Road (sections)

PART D

ROADSIDE

MANAGEMENT

RECOMMENDATIONS

1.0 Management Recommendations

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

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

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

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

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

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

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

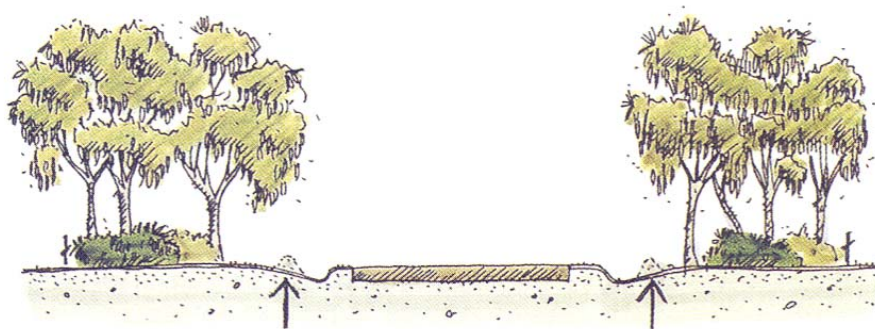
1.3 Improve roadside sections of medium to low conservation value by:

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

2.0 Minimising Disturbance

Minimal disturbance can be achieved by:

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

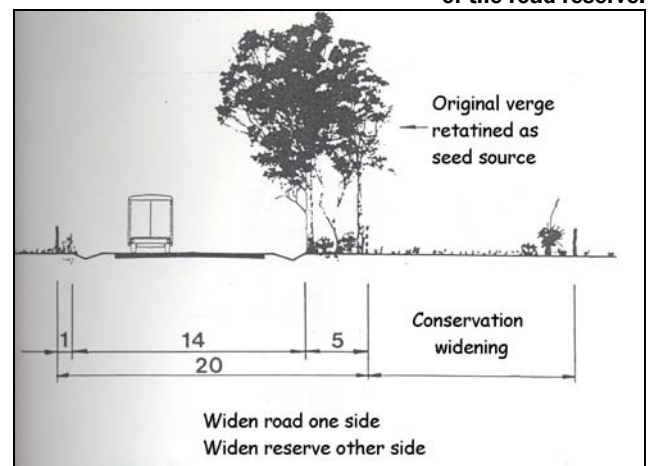


Avoid windrowing drain material into vegetation

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



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



3.0 Planning for Roadsides

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

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

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

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

4.0 Setting Objectives

The objective of all roadside management should be to:

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

References

- Beeston G, Mlodawski G, Saunders A and True D. (1993, unpub.), *Remnant Vegetation Inventory in the Southern Agricultural Areas of Western Australia*. Western Australian Department of Agriculture, South Perth.
- Department of Agriculture WA for Department of Environment (2003), Salinity Investment Framework Department Interim Report – Phase 1, 2003, Department of Environment, Salinity and Land Use Impacts Series No. SLUI 32
- Department of Agriculture WA (2005), Salinity in Western Australia, <http://agspsrv34.agric.wa.gov.au/environment/salinity/>
- Department of Environment and Heritage and the Department of Agriculture, Fisheries and Forestry Australia (2003), *Natural Heritage Trust- The Journal of the Natural Heritage Trust* Summer 2003, No 14. Department of Environment and Heritage and the Department of Agriculture, Fisheries and Forestry Australia, Canberra, Australia.
- Environment Australia (2001), *National Objectives and Targets for Biodiversity Conservation 2001-2005*. Environment Australia, Canberra, Australia.
- Jackson KA (2002), *Assessing Roadsides A Guide to Rating Conservation Value*, Roadside Conservation Committee, Kensington, Western Australia
- Lamont DA and Blyth JD (1995), Roadside corridors and community networks, pp 425-35. In *Nature Conservation 4: The Role of Networks*, ed by Saunders, D.A., Craig J.L., and Mattiske E.M. Surrey Beatty & Sons, 1995.
- Lamont DA (1998), *Western Australian Roadside Handbook: Environmental guidelines for road construction and maintenance workers*. Roadside Conservation Committee, Kensington, Western Australia.
- Lamont DA and Atkins K (2000), *Guidelines for Managing Special Environmental Areas in Transport Corridors*. Roadside Conservation Committee, Kensington, Western Australia.
- Lloyd S (2004) *Gardenote: Bulb and corm-producing plants that become bushland weeds*, June 2004, No. 16, Department of Agriculture WA.
- Platt SJ and Lowe KW (2002), Biodiversity Action Planning: Action planning for native biodiversity at multiple scales – catchment, bioregional, landscape, local. Department of Natural Resources and Environment, Melbourne.
- Roadside Conservation Committee. (1990), *Roadside Manual* Roadside Conservation Committee, Como WA
- Shepherd DP, Beeston GR and Hopkins AJM (2001), *Native Vegetation in Western Australia, Technical Report 249*, Department of Agriculture, Western Australia, South Perth
- Western Australian Museum (2005), Fauna Base, www.museum.wa.gov.au/faunabase/prod/index.htm

Appendix

1



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

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

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

Date _____
 Observer(s) _____
 Road Name _____
 Shire _____
 Nearest named place _____
 Direction of travel (N,S,E,W) _____
 Section No. _____
 Starting Point _____
 Odometer reading _____
 Ending Point _____
 Odometer reading _____
 Length of section _____

WIDTH OF ROAD RESERVE (m) _____

Side of the road Left Right

WIDTH OF VEGETATED ROADSIDE

1 – 5 m
 5 – 20 m
 Over 20 m

NATIVE VEGETATION ON ROADSIDE

Tree layer
 Shrub layer
 Ground layer

EXTENT OF NATIVE VEGETATION ON ROADSIDE

Less than 20%
 20 – 80%
 Over 80%

No. OF DIFFERENT NATIVE SPECIES

0 – 5
 6 – 19
 Over 20

VALUE AS A BIOLOGICAL CORRIDOR

Connects uncleared areas
 Flowering shrubs
 Large trees with hollows
 Hollow logs

PREDOMINANT ADJOINING LANDUSE

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

UTILITIES

Utility Present
 Utility Absent
 Type: _____

GENERAL WEEDS

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

SALT AFFECTED ROADSIDE

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

NOMINATED WEEDS

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

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

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

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

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

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

GENERAL COMMENTS

OFFICE USE ONLY
 Conservation value score

Appendix

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Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080001	1	0.00	7.60	7.60	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	1	1	1	7	7	WILD_OATS PATERSONS_CURSE WILD_RADISH AFRICAN_LOVEGRASS
4080001	2	7.60	8.40	0.80	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	0	1	0	1	0	1	0	1	0	0	0	2	2	2	6	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
4080001	3	8.40	10.60	2.20	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	2	2	1	1	0	0	1	1	1	1	0	0	5	5	WILD_OATS WILD_RADISH COUCH	
4080001	4	10.60	11.10	0.50	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	0	0	6	6	WILD_OATS	
4080001	5	11.10	12.10	1.00	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	1	2	0	8	6	WILD_OATS
4080001	6	12.10	13.30	1.20	GOOMALLING MECKERING RD	SW	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	1	2	0	8	6	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080001	7	13.30	14.90	1.60	GOOMALLING MECKERING RD	SW	14/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080001	8	14.90	18.10	3.20	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	1	2	2	8	8	WILD_RADISH WILD_OATS PATERSONS_CURSE AFRICAN_LOVEGRASS
4080001	9	18.10	18.80	0.70	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	1	1	0	1	0	1	0	1	1	1	1	2	2	4	7	WILD_RADISH WILD_OATS PATERSONS_CURSE AFRICAN_LOVEGRASS
4080001	10	18.80	20.00	1.20	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	0	1	0	1	0	1	0	1	0	1	1	2	2	2	7	WILD_RADISH WILD_OATS PATERSONS_CURSE AFRICAN_LOVEGRASS
4080001	11	20.00	22.70	2.70	GOOMALLING MECKERING RD	South	14/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS PATERSONS_CURSE AFRICAN_LOVEGRASS
4080002	1	0.00	0.90	0.90	YARRAMONY RD	South	3/11/05	katie	20	1	1	1	0	1	1	0	0	2	1	2	2	7	5	WILD_OATS PATERSONS_CURSE	
4080002	2	0.90	2.00	1.10	YARRAMONY RD	South	3/11/05	katie	20	1	1	1	0	1	1	0	0	0	0	0	2	3	4	4	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080002	3	2.00	2.60	0.60	YARRAMONY RD	South	3/11/05	katie	20	1	0	1	0	0	0	1	0	1	0	2	2	6	2	2	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080002	4	2.60	3.50	0.90	YARRAMONY RD	South	3/11/05	katie	20	1	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080002	5	3.50	3.70	0.20	YARRAMONY RD	South	3/11/05	katie	20	1	0	1	0	1	0	1	0	2	0	2	2	8	2	2	WILD_OATS PATERSONS_CURSE WILD_RADISH

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080002	6	3.70	4.30	0.60	YARRAMONY RD	South	3/11/05	katie	20	1	1	1	1	0	0	0	0	1	0	2	2	5	4	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080002	7	4.30	4.50	0.20	YARRAMONY RD	South	3/11/05	katie	20	1	0	1	0	0	0	0	0	2	0	2	2	6	2	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080002	8	4.50	5.30	0.80	YARRAMONY RD	South	3/11/05	katie	20	1	1	1	1	1	1	0	0	0	0	2	2	5	5	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080002	9	5.30	6.20	0.90	YARRAMONY RD	South	3/11/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080003	1	0.00	0.90	0.90	BEJOORDING RD	South	4/11/05	katie	20	1	1	1	1	1	1	0	0	2	2	0	2	5	7	WILD_OATS PATERSONS_CURSE	
4080003	2	0.90	1.30	0.40	BEJOORDING RD	South	4/11/05	katie	20	2	2	2	1	2	1	2	1	2	2	0	2	10	9	WILD_OATS	
4080003	3	1.30	2.40	1.10	BEJOORDING RD	South	4/11/05	katie	20	2	2	2	1	2	1	2	2	2	2	0	2	10	10	WILD_OATS	
4080003	4	2.40	4.96	2.56	BEJOORDING RD	South	4/11/05	katie	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080005	1	0.00	0.30	0.30	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	1	2	1	1	0	1	2	2	0	2	2	0	6	8	WILD_OATS	
4080005	2	0.30	1.90	1.60	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH
4080005	3	1.90	3.20	1.30	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH	
4080005	4	3.20	3.90	0.70	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	0	0	0	0	0	0	1	1	0	0	2	2	3	3	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH	
4080005	5	3.90	6.70	2.80	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	2	1	0	0	0	0	1	1	0	0	2	2	5	4	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH AFGHAN_THISTLE	
4080005	6	6.70	10.20	3.50	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	1	1	0	0	0	0	2	1	0	0	2	2	5	4	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH	
4080005	7	10.20	11.00	0.80	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	1	1	1	1	1	1	2	2	0	1	2	1	7	7	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH	
4080005	8	11.00	13.20	2.20	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	1	1	0	0	1	1	1	1	0	0	2	2	5	5	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH AFGHAN_THISTLE	
4080005	9	13.20	16.50	3.30	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	2	2	1	1	0	1	2	1	0	0	2	2	7	7	WILD_OATS WILD_RADISH	
4080005	10	16.50	18.50	2.00	KONNONGORRIN G WEST RD	West	9/11/05	MARG	20	2	1	1	0	1	0	2	1	0	0	2	2	8	4	WILD_OATS WILD_RADISH	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
4080006	1	0.00	0.60	0.60	DOWERIN KONNONGORING	West	16/11/05	MARG	20	2	2	1	1	1	1	2	2	0	0	2	2	8	8	WILD_OATS
4080006	2	0.60	1.20	0.60	DOWERIN KONNONGORING	West	16/11/05	MARG	40	2	2	1	1	1	1	2	2	0	2	2	0	8	8	WILD_OATS
4080006	3	1.20	6.00	4.80	DOWERIN KONNONGORING	West	16/11/05	MARG	60	2	2	1	1	1	1	2	2	0	0	2	2	8	8	WILD_OATS WILD_RADISH
4080006	4	6.00	7.20	1.20	DOWERIN KONNONGORING	West	16/11/05	MARG	60	1	1	1	1	1	1	2	2	0	0	2	2	7	7	WILD_OATS WILD_RADISH
4080006	5	7.20	8.00	0.80	DOWERIN KONNONGORING	West	16/11/05	MARG	60	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_OATS WILD_RADISH
4080006	6	8.00	9.20	1.20	DOWERIN KONNONGORING	West	16/11/05	MARG	60	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_OATS WILD_RADISH
4080007	1	0.00	0.90	0.90	OAK PARK RD	North	25/11/05	vanessa	20	2	2	2	2	1	1	1	1	2	2	1	1	9	9	WILD_OATS WILD_RADISH PATERSONS_CURSE
4080007	2	0.90	1.70	0.80	OAK PARK RD	North	25/11/05	vanessa	20	2	1	1	0	1	0	1	0	1	0	2	1	8	2	WILD_OATS WILD_RADISH PATERSONS_CURSE
4080007	3	1.70	5.00	3.30	OAK PARK RD	North	25/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	WILD_OATS WILD_RADISH PATERSONS_CURSE
4080007	4	5.00	5.70	0.70	OAK PARK RD	North	25/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	0	1	10	11	WILD_OATS
4080007	5	5.70	6.20	0.50	OAK PARK RD	North	25/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_OATS WILD_RADISH
4080007	6	6.20	6.80	0.60	OAK PARK RD	North	25/11/05	vanessa	20	1	2	0	1	0	1	0	1	0	1	2	2	3	8	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
4080007	7	6.80	7.50	0.70	OAK PARK RD	North	25/11/05	vanessa	20	2	2	0	0	0	0	0	0	1	0	2	2	5	4	WILD_OATS WILD_RADISH
4080007	8	7.50	8.20	0.70	OAK PARK RD	North	25/11/05	vanessa	20	2	2	0	1	0	1	0	2	1	1	2	2	5	9	WILD_OATS WILD_RADISH
4080007	9	8.20	8.90	0.70	OAK PARK RD	North	25/11/05	vanessa	20	2	2	0	0	0	0	0	0	1	1	1	1	4	4	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
4080007	10	8.90	10.50	1.60	OAK PARK RD	North	25/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	WILD_OATS WILD_RADISH
4080007	11	10.50	12.30	1.80	OAK PARK RD	North	25/11/05	vanessa	20	2	2	0	0	1	1	2	2	2	2	1	1	8	8	WILD_OATS WILD_RADISH
4080007	12	12.30	13.20	0.90	OAK PARK RD	North	25/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	WILD_OATS WILD_RADISH
4080007	13	13.20	15.00	1.80	OAK PARK RD	North	17/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	1	1	11	11	WILD_OATS WILD_RADISH
4080007	14	15.00	16.60	1.60	OAK PARK RD	North	17/11/05	vanessa	20	2	2	1	1	2	2	1	1	2	2	0	2	8	10	WILD_OATS WILD_RADISH

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
4080007	15	16.60	17.10	0.50	OAK PARK RD	north	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	0	2	7	9	WILD_OATS WILD_RADISH
4080008	1	0.00	0.50	0.50	BOLGART EAST RD	West	30/10/05	katie	20	2	2	1	1	1	1	0	0	2	2	0	0	6	6	WILD_OATS
4080008	2	0.50	0.80	0.30	BOLGART EAST RD	West	30/10/05	katie	20	2	2	1	1	1	1	1	1	2	1	0	2	7	8	WILD_OATS WILD_RADISH
4080008	3	0.80	1.00	0.20	BOLGART EAST RD	West	30/10/05	katie	20	2	2	1	1	1	0	1	1	1	1	2	2	8	7	WILD_OATS
4080008	4	1.00	1.70	0.70	BOLGART EAST RD	West	30/10/05	katie	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_OATS
4080008	5	1.70	3.50	1.80	BOLGART EAST RD	West	30/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080008	6	3.50	4.00	0.50	BOLGART EAST RD	West	30/10/05	katie	20	0	0	0	0	0	0	0	0	1	0	2	2	3	2	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080008	7	4.00	4.50	0.50	BOLGART EAST RD	West	30/10/05	katie	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080008	8	4.50	4.80	0.30	BOLGART EAST RD	West	30/10/05	katie	20	0	0	0	0	0	0	0	0	1	0	2	2	3	2	WILD_OATS
4080008	9	4.80	5.20	0.40	BOLGART EAST RD	West	30/10/05	katie	20	0	1	0	0	0	0	0	0	0	0	2	2	2	3	WILD_OATS WILD_RADISH
4080008	10	5.20	5.40	0.20	BOLGART EAST RD	West	30/10/05	katie	20	1	1	0	0	0	0	1	1	1	1	2	2	5	5	WILD_OATS WILD_RADISH
4080008	11	5.40	5.70	0.30	BOLGART EAST RD	West	30/10/05	katie	20	1	0	0	0	0	0	0	0	1	0	2	2	4	2	WILD_OATS WILD_RADISH
4080008	12	5.70	7.50	1.80	BOLGART EAST RD	West	30/10/05	katie	20	1	1	0	0	1	1	2	2	1	1	2	2	7	7	WILD_OATS WILD_RADISH
4080008	13	7.50	7.90	0.40	BOLGART EAST RD	West	30/10/05	katie	20	1	0	0	0	0	0	0	0	1	0	2	2	4	2	WILD_OATS WILD_RADISH
4080008	14	7.90	12.40	4.50	BOLGART EAST RD	West	30/10/05	katie	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
4080008	15	12.40	12.60	0.20	BOLGART EAST RD	West	30/10/05	katie	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_OATS
4080008	16	12.60	12.90	0.30	BOLGART EAST RD	West	30/10/05	katie	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	WILD_OATS
4080008	17	12.90	13.50	0.60	BOLGART EAST RD	West	30/10/05	katie	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	
4080008	18	13.50	14.20	0.70	BOLGART EAST RD	West	30/10/05	katie	20	2	2	1	0	2	0	2	0	2	1	0	2	9	5	WILD_OATS
4080008	19	14.20	14.50	0.30	BOLGART EAST RD	West	30/10/05	katie	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_OATS WILD_RADISH
4080009	1	0.00	2.48	2.48	HADDRILL RD	North	4/11/05	katie	20	1	1	1	1	1	1	1	1	1	2	2	2	7	8	WILD_OATS
4080009	2	2.48	2.78	0.30	HADDRILL RD	North	4/11/05	katie	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_OATS
4080009	3	2.78	3.38	0.60	HADDRILL RD	North	4/11/05	katie	20	2	1	1	1	1	1	1	1	2	1	2	2	9	7	WILD_OATS PATERSONS_CURSE
4080010	1	0.00	1.00	1.00	BEBAKINE RD	North	30/10/05	katie	20	1	1	1	1	0	0	1	1	1	2	2	2	6	7	WILD_OATS PATERSONS_CURSE

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080010	2	1.00	2.00	1.00	BEBAKINE RD	North	30/10/05	katie	20	0	1	0	1	0	1	0	0	0	1	2	2	2	6	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080010	3	2.00	3.00	1.00	BEBAKINE RD	North	30/10/05	katie	20	1	1	1	1	0	1	0	1	0	1	2	2	4	7	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080010	4	3.00	3.20	0.20	BEBAKINE RD	North	30/10/05	katie	20	2	1	1	1	1	1	1	1	2	2	2	2	9	8	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080010	5	3.20	3.40	0.20	BEBAKINE RD	North	30/10/05	katie	20	1	1	1	1	0	0	0	0	0	0	2	2	4	4	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080010	6	3.40	4.30	0.90	BEBAKINE RD	North	30/10/05	katie	20	0	0	0	0	0	0	0	0	1	1	2	2	3	3	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080010	7	4.30	5.50	1.20	BEBAKINE RD	North	30/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080010	8	5.50	6.20	0.70	BEBAKINE RD	North	30/10/05	katie	20	0	1	0	1	0	1	0	1	0	2	2	2	2	8	WILD_OATS	
4080010	9	6.20	7.80	1.60	BEBAKINE RD	North	30/10/05	katie	20	1	2	1	1	0	1	1	1	2	2	2	2	7	9	WILD_OATS	
4080010	10	7.80	8.00	0.20	BEBAKINE RD	North	30/10/05	katie	20	1	1	2	2	1	1	2	2	1	1	2	2	9	9	WILD_OATS	
4080010	11	8.00	9.10	1.10	BEBAKINE RD	North	30/10/05	katie	20	1	1	1	1	1	1	2	2	2	2	2	2	9	9	PATERSONS_CURSE WILD_OATS	
4080010	12	9.10	9.40	0.30	BEBAKINE RD	North	30/10/05	katie	20	0	0	0	0	0	0	0	0	1	0	2	2	3	2	PATERSONS_CURSE WILD_OATS	
4080010	13	9.40	9.70	0.30	BEBAKINE RD	North	30/10/05	katie	20	1	1	0	0	0	0	2	2	1	1	2	2	6	6	PATERSONS_CURSE WILD_OATS	
4080011	1	0.00	5.60	5.60	JENNACUBBINE EAST RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080011	2	5.60	6.50	0.90	JENNACUBBINE EAST RD	West	13/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080011	3	6.50	8.50	2.00	JENNACUBBINE EAST RD	North	13/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080012	1	0.00	1.40	1.40	TYNDALL RD	South	30/10/05	katie	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	PATERSONS_CURSE WILD_OATS	
4080012	2	1.40	1.90	0.50	TYNDALL RD	South	30/10/05	katie	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	PATERSONS_CURSE WILD_OATS WILD_RADISH	
4080012	3	1.90	2.20	0.30	TYNDALL RD	South	30/10/05	katie	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080012	4	2.20	2.50	0.30	TYNDALL RD	South	30/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080012	5	2.50	2.70	0.20	TYNDALL RD	South	30/10/05	katie	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_RADISH PATERSONS_CURSE WILD_OATS	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data					
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	FINAL OVERLAYS		
4080012	6	2.70	3.90	1.20	TYNDALL RD	South	30/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS				
4080012	7	3.90	4.60	0.70	TYNDALL RD	South	30/10/05	katie	20	1	1	0	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH WILD_OATS				
4080012	8	4.60	5.10	0.50	TYNDALL RD	South	30/10/05	katie	20	0	1	0	0	0	0	0	0	0	0	1	2	2	2	4	4	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS			
4080012	9	5.10	5.70	0.60	TYNDALL RD	South	30/10/05	katie	20	1	1	0	1	0	0	0	0	1	1	1	2	2	4	6	6	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS			
4080012	10	5.70	6.20	0.50	TYNDALL RD	South	30/10/05	katie	20	0	1	0	1	0	1	0	1	1	1	1	2	2	3	7	7	WILD_OATS AFRICAN_LOVEGRASS			
4080012	11	6.20	7.40	1.20	TYNDALL RD	South	30/10/05	katie	20	1	2	1	1	1	1	1	1	2	2	2	2	2	8	10	10	WILD_OATS AFRICAN_LOVEGRASS			
4080012	12	7.40	8.50	1.10	TYNDALL RD	South	30/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE	
4080012	13	8.50	9.30	0.80	TYNDALL RD	South	30/10/05	katie	20	1	1	0	0	0	0	0	1	1	1	2	2	2	5	6	6	6	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE		
4080012	14	9.30	9.60	0.30	TYNDALL RD	South	30/10/05	katie	20	0	0	0	0	0	0	0	0	0	1	1	2	2	3	3	3	3	3	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE	
4080012	15	9.60	9.90	0.30	TYNDALL RD	South	30/10/05	katie	20	1	0	1	0	0	0	0	0	0	1	1	2	2	5	3	3	3	3	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE	
4080012	16	9.90	10.40	0.50	TYNDALL RD	South	30/10/05	katie	20	0	0	0	0	0	0	0	0	0	1	1	2	2	3	3	3	3	3	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE	
4080012	17	10.40	10.50	0.10	TYNDALL RD	South	30/10/05	katie	20	0	1	0	0	0	0	0	0	0	0	0	2	2	2	2	3	3	3	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE	
4080012	18	10.50	10.80	0.30	TYNDALL RD	South	30/10/05	katie	20	0	0	0	0	0	0	0	0	2	0	1	2	0	2	3	3	3	3	WILD_OATS WILD_RADISH	
4080012	19	10.80	11.20	0.40	TYNDALL RD	South	30/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	WILD_OATS WILD_RADISH
4080012	20	11.20	12.00	0.80	TYNDALL RD	South	30/10/05	katie	20	1	1	1	1	0	0	0	0	2	0	2	2	2	6	4	4	4	4	WILD_OATS WILD_RADISH	
4080012	21	12.00	12.60	0.60	TYNDALL RD	South	30/10/05	katie	20	2	2	1	1	1	1	1	1	0	2	2	0	2	7	8	8	8	8	WILD_OATS WILD_RADISH	
4080012	22	12.60	13.70	1.10	TYNDALL RD	South	30/10/05	katie	20	2	2	1	1	1	1	1	1	1	2	2	0	2	7	9	9	9	9	WILD_OATS WILD_RADISH	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080012	23	13.70	14.00	0.30	TYNDALL RD	East	3/11/05	katie	20	1	1	1	1	1	1	0	0	0	2	2	0	5	5	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080012	24	14.00	14.20	0.20	TYNDALL RD	East	3/11/05	katie	20	1	1	1	1	1	1	2	2	2	2	0	0	7	7	WILD_OATS WILD_RADISH	
4080012	25	14.20	14.76	0.56	TYNDALL RD	East	3/11/05	katie	20	1	1	1	1	0	0	1	1	2	2	2	2	7	7	WILD_OATS WILD_RADISH	
4080013	1	0.00	0.30	0.30	LONG FORREST RD	East	1/11/05	katie	20	1	2	1	1	1	1	1	1	1	1	2	2	7	8	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080013	2	0.30	1.30	1.00	LONG FORREST RD	East	1/11/05	katie	20	2	0	1	0	1	0	1	0	2	0	2	2	9	2	WILD_OATS PATERSONS_CURSE PATERSONS_CURSE	
4080013	3	1.30	1.90	0.60	LONG FORREST RD	East	1/11/05	katie	20	0	1	0	0	0	0	0	0	0	2	2	2	2	5	5	WILD_OATS PATERSONS_CURSE PATERSONS_CURSE
4080013	4	1.90	3.10	1.20	LONG FORREST RD	East	1/11/05	katie	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	WILD_OATS PATERSONS_CURSE PATERSONS_CURSE	
4080013	5	3.10	3.90	0.80	LONG FORREST RD	East	1/11/05	katie	20	0	0	0	0	0	0	0	0	1	1	2	2	3	3	WILD_OATS PATERSONS_CURSE PATERSONS_CURSE	
4080013	6	3.90	4.00	0.10	LONG FORREST RD	East	1/11/05	katie	20	0	1	0	0	0	0	0	0	1	2	2	2	3	5	WILD_OATS PATERSONS_CURSE	
4080013	7	4.00	4.20	0.20	LONG FORREST RD	East	1/11/05	katie	20	0	1	0	0	0	0	0	0	1	0	2	2	3	3	WILD_OATS PATERSONS_CURSE	
4080013	8	4.20	4.70	0.50	LONG FORREST RD	East	1/11/05	katie	20	0	2	0	1	0	1	0	1	0	1	2	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080013	9	4.70	5.00	0.30	LONG FORREST RD	East	1/11/05	katie	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080013	10	5.00	8.10	3.10	LONG FORREST RD	East	1/11/05	katie	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080013	11	8.10	10.00	1.90	LONG FORREST RD	East	1/11/05	katie	20	1	1	1	1	1	1	2	2	0	1	2	2	7	8	PATERSONS_CURSE COUCH WILD_OATS WILD_RADISH	
4080013	12	10.00	11.00	1.00	LONG FORREST RD	East	1/11/05	katie	20	2	2	1	1	1	1	2	2	2	2	2	2	10	10	PATERSONS_CURSE WILD_OATS	
4080013	13	11.00	12.80	1.80	LONG FORREST RD	East	1/11/05	katie	20	1	1	1	1	1	1	1	1	2	0	0	2	6	6	PATERSONS_CURSE WILD_OATS	
4080013	14	12.80	13.10	0.30	LONG FORREST RD	East	1/11/05	katie	20	1	0	0	0	0	0	2	0	1	0	2	2	6	2	WILD_RADISH WILD_OATS	
4080013	15	13.10	16.86	3.76	LONG FORREST RD	East	1/11/05	katie	20	1	1	1	1	1	1	2	2	2	2	2	2	9	9	WILD_RADISH WILD_OATS COUCH	
4080014	1	0.00	3.30	3.30	PATTERSON RD	SW	13/11/05	RB boase	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_RADISH WILD_OATS	

Road#	Sectn#	ODStart (km)	ODFinish (km)	Sectn Length (km)	ROAD NAME	Direction	Date	Observer	Width (m)	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data FINAL OVERLAYS
										Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4080014	2	3.30	4.60	1.30	PATTERSON RD	West	13/11/05	RB boase	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	WILD_RADISH WILD_OATS PATERSONS_CURSE
4080014	3	4.60	5.30	0.70	PATTERSON RD	West	13/11/05	RB boase	20	2	2	0	0	0	0	0	0	1	0	0	1	3	3	WILD_OATS
4080014	4	5.30	6.30	1.00	PATTERSON RD	West	13/11/05	RB boase	20	2	2	2	2	1	1	2	2	1	1	2	2	10	10	WILD_OATS
4080014	5	6.30	6.60	0.30	PATTERSON RD	West	13/11/05	RB boase	20	2	2	2	2	1	1	2	2	0	1	2	0	9	8	WILD_OATS
4080014	6	6.60	8.30	1.70	PATTERSON RD	West	13/11/05	RB boase	20	1	1	0	0	1	1	0	0	0	0	2	2	4	4	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH COUCH
4080014	7	8.30	9.30	1.00	PATTERSON RD	West	13/11/05	RB boase	20	1	2	0	1	1	1	0	1	0	1	2	1	4	7	WILD_OATS WILD_RADISH COUCH
4080015	1	0.00	1.60	1.60	BEECROFT RD	North	19/10/05	katie	20	1	1	0	0	0	1	0	0	0	0	2	2	3	4	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	2	1.60	2.20	0.60	BEECROFT RD	North	19/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	3	2.20	3.20	1.00	BEECROFT RD	North	19/10/05	katie	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	4	3.20	4.60	1.40	BEECROFT RD	North	19/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	5	4.60	4.80	0.20	BEECROFT RD	North	19/10/05	katie	20	1	0	1	0	1	0	1	0	1	0	2	2	7	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	6	4.80	5.80	1.00	BEECROFT RD	North	19/10/05	katie	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	7	5.80	6.40	0.60	BEECROFT RD	North	19/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	8	6.40	8.20	1.80	BEECROFT RD	West	19/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	9	8.20	9.20	1.00	BEECROFT RD	West	19/10/05	katie	20	1	1	1	1	1	1	0	0	1	1	2	2	6	6	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	10	9.20	10.20	1.00	BEECROFT RD	West	19/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080015	11	10.20	11.90	1.70	BEECROFT RD	West	19/10/05	katie	20	2	1	1	1	1	1	2	1	1	0	2	2	9	6	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080016	1	0.00	1.40	1.40	GLATZ RD	North	17/11/05	vanessa	20	2	2	1	1	0	0	1	1	1	1	1	1	6	6	WILD_OATS WILD_RADISH
4080016	2	1.40	1.80	0.40	GLATZ RD	North	17/11/05	vanessa	20	2	1	0	0	0	0	0	0	0	0	2	1	4	2	WILD_OATS WILD_RADISH
4080016	3	1.80	2.60	0.80	GLATZ RD	North	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	2	1	9	8	WILD_OATS WILD_RADISH

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
4080016	4	2.60	3.40	0.80	GLATZ RD	North	17/11/05	vanessa	20	2	2	1	1	1	1	2	1	1	2	1	1	8	8	WILD_OATS	
4080016	5	3.40	4.00	0.60	GLATZ RD	North	17/11/05	vanessa	20	2	2	0	0	0	0	1	1	2	2	2	2	7	7	WILD_OATS AFRICAN_LOVEGRASS	
4080016	6	4.00	6.10	2.10	GLATZ RD	north	17/11/05	vanessa	20	2	2	0	0	0	0	1	1	0	1	2	2	5	6	WILD_OATS WILD_RADISH	
4080016	7	6.10	6.50	0.40	GLATZ RD	north	17/11/05	vanessa	20	1	2	0	0	0	0	0	0	1	1	2	1	4	4	PATERSONS_CURSE WILD_OATS	
4080016	8	6.50	9.30	2.80	GLATZ RD	north	17/11/05	vanessa	20	2	2	1	1	1	1	2	2	2	2	2	1	10	9	PATERSONS_CURSE WILD_OATS	
4080016	9	9.30	12.00	2.70	GLATZ RD	North	10/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	1	4	3	WILD_OATS PATERSONS_CURSE	
4080016	10	12.00	13.78	1.78	GLATZ RD	North	10/11/05	MARG	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	WILD_OATS PATERSONS_CURSE	
4080017	1	0.00	4.70	4.70	ROSSMORE RD	South	17/11/05	RB boase	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080017	2	4.70	5.40	0.70	ROSSMORE RD	North	17/11/05	RB boase	20	1	1	1	1	0	0	0	0	0	0	2	2	4	4	WILD_OATS PATERSONS_CURSE WILD_RADISH AFRICAN_LOVEGRASS COUCH	
4080017	3	5.40	6.10	0.70	ROSSMORE RD	North	1/11/05	katie	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	WILD_RADISH COUCH WILD_OATS PATERSONS_CURSE	
4080017	4	6.10	6.30	0.20	ROSSMORE RD	North	1/11/05	katie	20	1	0	1	0	0	0	0	0	1	0	2	2	5	2	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080017	5	6.30	7.40	1.10	ROSSMORE RD	North	1/11/05	katie	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	WILD_RADISH COUCH WILD_OATS PATERSONS_CURSE	
4080017	6	7.40	7.90	0.50	ROSSMORE RD	North	1/11/05	katie	20	0	0	0	0	0	0	0	0	1	1	2	2	3	3	WILD_OATS COUCH WILD_RADISH PATERSONS_CURSE	
4080017	7	7.90	9.00	1.10	ROSSMORE RD	North	1/11/05	katie	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_OATS COUCH WILD_RADISH PATERSONS_CURSE	
4080017	8	9.00	10.00	1.00	ROSSMORE RD	North	1/11/05	katie	20	2	2	1	1	0	0	1	1	1	2	2	0	7	6	WILD_OATS WILD_RADISH	
4080017	9	10.00	10.20	0.20	ROSSMORE RD	North	1/11/05	katie	20	1	1	1	1	0	0	1	1	2	2	2	2	7	7	WILD_OATS WILD_RADISH	
4080018	1	0.00	1.30	1.30	LAWLER RD	East	3/11/05	katie	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8	PATERSONS_CURSE WILD_OATS WILD_RADISH	
4080018	2	1.30	1.90	0.60	LAWLER RD	East	3/11/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	PATERSONS_CURSE WILD_OATS WILD_RADISH
4080018	3	1.90	2.40	0.50	LAWLER RD	East	3/11/05	katie	20	2	2	2	2	1	1	2	2	2	2	0	0	9	9	PATERSONS_CURSE WILD_OATS WILD_RADISH	
4080018	4	2.40	2.70	0.30	LAWLER RD	East	3/11/05	katie	20	2	2	2	2	1	1	2	2	2	2	2	2	11	11	WILD_OATS	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data						
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right	Left	Right			
4080018	5	2.70	4.40	1.70	LAWLER RD	East	3/11/05	katie	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH						
4080018	6	4.40	4.70	0.30	LAWLER RD	East	3/11/05	katie	20	0	1	0	1	0	0	0	0	0	0	2	2	2	4	4	WILD_OATS PATERSONS_CURSE WILD_RADISH					
4080018	7	4.70	5.40	0.70	LAWLER RD	East	3/11/05	katie	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	3	3	WILD_OATS PATERSONS_CURSE WILD_RADISH				
4080018	8	5.40	7.40	2.00	LAWLER RD	East	3/11/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	WILD_OATS COUCH PATERSONS_CURSE WILD_RADISH AFGHAN_THISTLE		
4080019	1	0.00	0.22	0.22	GABBYQUOIQUO I RD	East	30/10/05	MARG	20	2	2	0	0	1	1	1	1	0	0	2	2	6	6	6	6	6	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS		
4080019	2	0.22	2.42	2.20	GABBYQUOIQUO I RD	East	30/10/05	MARG	20	2	2	1	1	1	1	2	2	0	0	2	2	8	8	8	8	8	8	WILD_OATS		
4080019	3	2.42	3.92	1.50	GABBYQUOIQUO I RD	North	30/10/05	MARG	20	2	1	0	0	0	0	1	1	0	0	2	2	5	4	4	4	4	4	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS		
4080019	4	3.92	5.82	1.90	GABBYQUOIQUO I RD	East	30/10/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	4	4	4	4	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS		
4080019	5	5.82	7.22	1.40	GABBYQUOIQUO I RD	South	30/10/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS	
4080019	6	7.22	7.92	0.70	GABBYQUOIQUO I RD	South	30/10/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	4	4	4	4	4	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS	
4080019	7	7.92	9.82	1.90	GABBYQUOIQUO I RD	South	30/10/05	MARG	20	1	0	0	0	0	0	0	1	0	0	2	2	3	3	3	3	3	3	3	3	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
4080020	1	0.00	3.80	3.80	BYBERDING RD	East	30/10/05	MARG	20	2	2	0	0	1	1	1	1	0	0	2	2	6	6	6	6	6	6	6	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
4080020	2	3.80	8.14	4.34	BYBERDING RD	North	30/10/05	MARG	20	1	1	0	0	0	0	2	2	1	2	2	2	6	7	7	7	7	7	7	7	WILD_OATS AFRICAN_LOVEGRASS
4080020	3	8.14	9.30	1.16	BYBERDING RD	West	30/10/05	MARG	20	2	2	0	0	0	0	2	2	1	1	2	2	7	7	7	7	7	7	7	7	WILD_OATS
4080020	4	9.30	10.40	1.10	BYBERDING RD	West	30/10/05	MARG	20	2	2	1	1	1	1	2	2	1	1	2	2	9	9	9	9	9	9	9	9	WILD_OATS
4080020	5	10.40	10.80	0.40	BYBERDING RD	West	30/10/05	MARG	20	2	2	1	1	1	1	2	2	2	2	2	2	10	10	10	10	10	10	10	10	WILD_OATS
4080020	6	10.80	11.70	0.90	BYBERDING RD	West	30/10/05	MARG	20	2	2	1	1	0	0	2	2	1	1	2	2	8	8	8	8	8	8	8	8	WILD_OATS
4080020	7	11.70	12.87	1.17	BYBERDING RD	West	30/10/05	MARG	20	2	2	1	1	0	0	1	1	1	1	2	2	7	7	7	7	7	7	7	7	WILD_OATS
4080021	1	0.00	0.80	0.80	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	0	0	0	0	0	1	1	2	2	1	5	6	6	6	6	6	6	6	WILD_RADISH WILD_OATS PATERSONS_CURSE
4080021	2	0.80	4.60	3.80	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	1	1	11	11	11	11	11	11	11	11	WILD_RADISH WILD_OATS PATERSONS_CURSE

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080021	3	4.60	5.10	0.50	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	1	1	0	0	1	1	0	0	1	1	5	5	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080021	4	5.10	6.80	1.70	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	2	2	1	12	11	WILD_RADISH WILD_OATS PATERSONS_CURSE
4080021	5	6.80	8.50	1.70	BOTHERLING EAST RD	South	14/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_RADISH WILD_OATS
4080021	6	8.50	9.10	0.60	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	2	2	2	1	1	1	2	1	0	2	9	9	WILD_OATS	
4080021	7	9.10	9.70	0.60	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_OATS
4080021	8	9.70	10.90	1.20	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	2	2	1	1	2	2	2	2	2	2	2	10	10	WILD_OATS
4080021	9	10.90	12.20	1.30	BOTHERLING EAST RD	East	14/11/05	vanessa	20	1	1	0	0	0	0	1	0	1	0	2	1	5	2	AFRICAN_LOVEGRASS WILD_OATS WILD_RADISH	
4080021	10	12.20	12.90	0.70	BOTHERLING EAST RD	East	14/11/05	vanessa	20	2	2	0	1	0	1	1	1	2	2	2	2	1	7	8	WILD_OATS WILD_RADISH
4080021	11	12.90	14.00	1.10	BOTHERLING EAST RD	East	14/11/05	vanessa	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_OATS WILD_RADISH	
4080022	1	0.00	0.40	0.40	HUGHES RD	West	4/11/05	katie	20	1	1	1	1	1	1	1	1	2	1	0	0	6	5	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080022	2	0.40	1.20	0.80	HUGHES RD	West	4/11/05	katie	20	1	2	1	2	1	2	1	1	2	2	2	0	8	9	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080022	3	1.20	2.49	1.29	HUGHES RD	West	4/11/05	katie	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080023	1	0.00	1.30	1.30	UCARTY RD	West	13/11/05	RB boase	20	2	2	0	0	1	1	0	0	0	0	2	2	5	5	WILD_OATS	
4080023	2	1.30	1.80	0.50	UCARTY RD	West	13/11/05	RB boase	20	1	1	1	1	1	1	1	1	0	2	2	0	6	6	WILD_OATS	
4080023	3	1.80	2.80	1.00	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	WILD_OATS	
4080023	4	2.80	3.10	0.30	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	0	0	6	6	WILD_OATS	
4080023	5	3.10	4.50	1.40	UCARTY RD	West	13/11/05	RB boase	20	1	1	1	1	1	1	1	1	0	1	2	0	6	5	WILD_OATS	
4080023	6	4.50	5.70	1.20	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	WILD_OATS	
4080023	7	5.70	6.50	0.80	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	2	1	0	2	7	8	WILD_OATS	
4080023	8	6.50	7.60	1.10	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	0	0	2	6	7	WILD_OATS	
4080023	9	7.60	8.10	0.50	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	0	0	2	6	7	WILD_OATS	
4080023	10	8.10	8.70	0.60	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	0	0	6	6	WILD_OATS	
4080023	11	8.70	11.70	3.00	UCARTY RD	West	13/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS WILD_RADISH PATERSONS_CURSE	
4080024	1	0.00	5.40	5.40	CARTER RD	North	10/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080024	2	5.40	5.60	0.20	CARTER RD	East	10/11/05	MARG	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_OATS	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
4080024	3	5.60	6.50	0.90	CARTER RD	East	10/11/05	MARG	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	PATERSONS_CURSE WILD_OATS WILD_RADISH
4080024	4	6.50	8.40	1.90	CARTER RD	East	10/11/05	MARG	20	1	1	1	1	1	1	2	2	0	0	2	2	7	7	WILD_OATS
4080025	1	0.00	4.67	4.67	BROOKSBANK RD	East	14/11/05	RB boase	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_RADISH AFRICAN_LOVEGRASS PATERSONS_CURSE WILD_OATS COUCH
4080026	1	0.00	0.30	0.30	LEESON RD	NW	3/11/05	katie	20	1	1	1	1	1	1	0	0	1	0	2	2	4	5	
4080026	2	0.30	7.73	7.43	LEESON RD	NW	3/11/05	katie	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080027	1	0.00	1.00	1.00	BERRING EAST RD	East	17/11/05	RB boase	20	1	1	0	0	0	0	1	1	1	1	2	2	6	6	WILD_RADISH PATERSONS_CURSE WILD_OATS AFRICAN_LOVEGRASS AFGHAN_THISTLE
4080027	2	1.00	1.30	0.30	BERRING EAST RD	East	17/11/05	RB boase	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080027	3	1.30	2.10	0.80	BERRING EAST RD	East	17/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH COUCH WILD_OATS AFRICAN_LOVEGRASS
4080027	4	2.10	2.90	0.80	BERRING EAST RD	East	17/11/05	RB boase	20	2	2	1	1	1	1	1	1	0	0	2	2	7	7	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080027	5	2.90	3.41	0.51	BERRING EAST RD	East	17/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080028	1	0.00	0.20	0.20	BURABADJI EAST RD	East	17/11/05	vanessa	20	1	2	0	2	0	2	0	2	0	2	2	0	3	10	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080028	2	0.20	1.40	1.20	BURABADJI EAST RD	East	17/11/05	vanessa	20	2	2	1	1	1	1	0	1	1	2	1	1	6	8	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080028	3	1.40	1.90	0.50	BURABADJI EAST RD	East	17/11/05	vanessa	20	2	2	1	2	0	2	1	2	1	2	1	0	6	10	WILD_OATS
4080028	4	1.90	2.30	0.40	BURABADJI EAST RD	East	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	1	1	1	1	7	7	WILD_RADISH WILD_OATS
4080028	5	2.30	3.40	1.10	BURABADJI EAST RD	East	17/11/05	vanessa	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	COUCH PATERSONS_CURSE WILD_RADISH WILD_OATS
4080028	6	3.40	4.50	1.10	BURABADJI EAST RD	East	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	PATERSONS_CURSE
4080029	1	0.00	0.70	0.70	BURABADJI RD	West	17/11/05	vanessa	20	2	2	1	0	1	1	1	1	2	1	1	1	8	6	WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
4080029	2	0.70	1.60	0.90	BURABADJI RD	West	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	1	1	1	8	7	WILD_OATS WILD_RADISH

Road#	Sectn#	ODStart	ODFinish	Sectn Length (km)	ROAD NAME	Direction	Date	Observer	Width (m)	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data FINAL OVERLAYS	
		(km)	(km)							Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right		Left
4080029	3	1.60	2.40	0.80	BURABADJI RD	South	17/11/05	vanessa	20	2	2	0	0	1	1	2	2	2	2	0	0	7	7	WILD_OATS	
4080029	4	2.40	2.70	0.30	BURABADJI RD	South	17/11/05	vanessa	20	1	1	0	0	0	0	2	2	1	1	0	0	4	4	WILD_OATS	
4080029	5	2.70	3.50	0.80	BURABADJI RD	West	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	1	2	2	0	0	8	7	WILD_OATS
4080029	6	3.50	3.70	0.20	BURABADJI RD	West	17/11/05	vanessa	20	1	1	0	0	0	0	2	2	0	1	1	1	1	4	5	WILD_OATS COUCH AFRICAN_LOVEGRASS PATERSONS_CURSE
4080029	7	3.70	4.50	0.80	BURABADJI RD	West	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	1	2	1	1	7	8	WILD_OATS AFRICAN_LOVEGRASS	
4080029	8	4.50	5.70	1.20	BURABADJI RD	West	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	2	8	9	WILD_OATS	
4080029	9	5.70	7.08	1.38	BURABADJI RD	West	17/11/05	vanessa	20	2	2	1	0	1	1	1	0	1	1	1	2	7	6	WILD_OATS WILD_RADISH	
4080030	1	0.00	0.40	0.40	PRYOR RD	West	17/11/05	vanessa	20	2	1	1	0	1	0	2	0	1	0	1	2	8	3	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS	
4080030	2	0.40	1.10	0.70	PRYOR RD	North	17/11/05	vanessa	20	1	2	0	0	0	0	0	0	1	1	1	2	3	5	WILD_OATS WILD_RADISH	
4080030	3	1.10	1.40	0.30	PRYOR RD	North	17/11/05	vanessa	20	0	2	0	1	0	1	2	2	0	1	1	2	3	9	WILD_OATS WILD_RADISH	
4080030	4	1.40	2.00	0.60	PRYOR RD	North	17/11/05	vanessa	20	1	2	0	2	0	2	0	2	1	2	1	0	3	10	WILD_OATS WILD_RADISH	
4080030	5	2.00	2.60	0.60	PRYOR RD	North	17/11/05	vanessa	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	WILD_RADISH	
4080030	6	2.60	2.90	0.30	PRYOR RD	North	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	WILD_OATS WILD_RADISH	
4080030	7	2.90	3.60	0.70	PRYOR RD	North	17/11/05	vanessa	20	2	2	1	0	1	0	1	0	2	1	1	1	8	4	WILD_OATS WILD_RADISH	
4080030	8	3.60	5.50	1.90	PRYOR RD	North	17/11/05	vanessa	20	2	2	2	2	2	2	1	1	2	2	1	1	10	10	WILD_OATS WILD_RADISH PATERSONS_CURSE COUCH	
4080031	1	0.00	0.90	0.90	SHELL RD	East	16/11/05	vanessa	20	2	2	0	1	1	1	1	1	2	2	1	1	7	8	WILD_RADISH WILD_OATS COUCH	
4080031	2	0.90	2.50	1.60	SHELL RD	East	16/11/05	vanessa	20	1	2	0	1	1	1	0	0	1	1	2	2	5	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS COUCH	
4080031	3	2.50	2.70	0.20	SHELL RD	East	16/11/05	vanessa	20	2	2	1	0	1	0	1	0	1	1	2	2	8	5	WILD_RADISH WILD_OATS	
4080031	4	2.70	3.30	0.60	SHELL RD	East	16/11/05	vanessa	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS AFGHAN_THISTLE	
4080031	5	3.30	3.90	0.60	SHELL RD	NE	16/11/05	vanessa	20	1	2	0	0	0	0	0	0	1	1	1	1	3	4	WILD_RADISH COUCH WILD_OATS AFRICAN_LOVEGRASS	
4080031	6	3.90	6.00	2.10	SHELL RD	NE	16/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	COUCH WILD_OATS AFGHAN_THISTLE	
4080031	7	6.00	8.60	2.60	SHELL RD	NE	16/11/05	vanessa	20	1	1	0	0	0	0	2	2	0	0	1	1	4	4	COUCH WILD_OATS	
4080031	8	8.60	8.80	0.20	SHELL RD	NE	16/11/05	vanessa	20	2	2	2	2	1	1	2	2	1	1	2	2	10	10	WILD_OATS	
4080032	1	0.00	0.60	0.60	SPARK RD	West	14/11/05	vanessa	20	2	2	1	2	1	1	1	2	2	2	1	1	8	10	WILD_RADISH WILD_OATS	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right		Left
4080032	2	0.60	0.90	0.30	SPARK RD	West	14/11/05	vanessa	20	2	1	1	0	0	0	0	1	0	1	1	2	2	7	4	WILD_RADISH WILD_OATS
4080032	3	0.90	2.60	1.70	SPARK RD	West	14/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	2	2	9	10	WILD_RADISH WILD_OATS	
4080032	4	2.60	3.10	0.50	SPARK RD	West	14/11/05	vanessa	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	WILD_RADISH WILD_OATS COUCH	
4080032	5	3.10	3.80	0.70	SPARK RD	West	14/11/05	vanessa	20	2	1	0	0	1	0	1	0	1	0	2	2	7	3	WILD_RADISH WILD_OATS COUCH	
4080032	6	3.80	4.30	0.50	SPARK RD	West	14/11/05	vanessa	20	2	2	1	1	1	1	1	1	1	2	2	2	8	9	WILD_RADISH WILD_OATS	
4080032	7	4.30	4.70	0.40	SPARK RD	West	14/11/05	vanessa	20	1	1	0	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH WILD_OATS
4080032	8	4.70	6.20	1.50	SPARK RD	West	14/11/05	vanessa	20	2	2	0	0	1	0	1	1	1	0	2	2	7	5	WILD_RADISH COUCH WILD_OATS AFRICAN_LOVEGRASS	
4080032	9	6.20	6.28	0.08	SPARK RD	West	14/11/05	vanessa	20	2	2	0	0	1	1	1	1	2	2	2	2	8	8	WILD_OATS	
4080033	1	0.00	0.40	0.40	WONGAMINE RD	South	4/11/05	katie	20	1	1	2	2	0	0	2	2	1	1	0	0	6	6		
4080033	2	0.40	1.00	0.60	WONGAMINE RD	South	4/11/05	katie	20	1	1	1	1	0	0	0	0	0	0	0	0	2	2	WILD_OATS WILD_RADISH	
4080034	1	0.00	0.80	0.80	LORD RD	West	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	1	2	2	1	2	8	9	WILD_RADISH WILD_OATS AFGHAN_THISTLE
4080034	2	0.80	2.70	1.90	LORD RD	West	17/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	2	1	2	11	12	WILD_RADISH WILD_OATS PATERSONS_CURSE
4080034	3	2.70	3.10	0.40	LORD RD	West	17/11/05	vanessa	20	2	2	0	0	0	0	0	0	0	1	1	1	1	4	4	WILD_RADISH WILD_OATS PATERSONS_CURSE
4080034	4	3.10	4.30	1.20	LORD RD	West	17/11/05	vanessa	20	2	2	1	1	1	1	2	2	2	2	2	1	0	9	8	WILD_RADISH WILD_OATS
4080034	5	4.30	5.20	0.90	LORD RD	West	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	2	8	9	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080034	6	5.20	6.70	1.50	LORD RD	West	17/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	2	2	10	12	WILD_OATS PATERSONS_CURSE	
4080035	1	0.00	4.80	4.80	HULONGINE RD	West	17/11/05	RB boase	20	1	1	1	1	0	0	1	1	1	1	1	1	5	5	WILD_OATS WILD_RADISH	
4080035	2	4.80	6.00	1.20	HULONGINE RD	West	17/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	WILD_OATS WILD_RADISH	
4080035	3	6.00	6.46	0.46	HULONGINE RD	West	17/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	0	2	0	5	3	WILD_OATS WILD_RADISH	
4080036	1	1.50	2.20	0.70	FAIRLIE RD	North	16/11/05	MARG	20	2	2	0	0	0	0	1	1	0	0	1	2	4	5	WILD_RADISH WILD_OATS	
4080036	2	2.20	3.00	0.80	FAIRLIE RD	North	16/11/05	MARG	20	2	2	0	0	0	0	2	2	0	0	2	2	6	6	WILD_RADISH WILD_OATS	
4080036	3	3.00	3.22	0.22	FAIRLIE RD	North	16/11/05	MARG	20	0	0	0	0	0	0	2	2	0	0	2	2	4	4	WILD_RADISH WILD_OATS	
4080037	1	0.00	1.10	1.10	GRIFFITH WHALEY RD	North	16/11/05	MARG	20	0	0	0	0	0	0	1	1	0	0	2	2	3	3	WILD_RADISH WILD_OATS	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080037	2	1.10	4.20	3.10	GRIFFITH WHALEY RD	North	16/11/05	MARG	20	0	0	0	0	0	0	2	1	0	0	2	2	4	3	WILD_RADISH WILD_OATS	
4080037	3	4.20	5.40	1.20	GRIFFITH WHALEY RD	North	16/11/05	MARG	20	2	2	0	0	0	0	2	2	0	0	1	1	5	5	WILD_OATS	
4080037	4	5.40	7.00	1.60	GRIFFITH WHALEY RD	East	16/11/05	MARG	20	0	0	0	0	0	0	1	1	1	1	1	1	3	3	AFRICAN_LOVEGRASS WILD_OATS	
4080037	5	7.00	7.80	0.80	GRIFFITH WHALEY RD	East	16/11/05	MARG	20	2	1	0	0	0	0	1	1	0	0	1	1	4	3	AFRICAN_LOVEGRASS WILD_OATS	
4080037	6	7.80	9.40	1.60	GRIFFITH WHALEY RD	East	16/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	1	1	3	3	AFRICAN_LOVEGRASS WILD_OATS WILD_RADISH	
4080038	1	0.00	0.80	0.80	COOPER RD	North	16/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	AFRICAN_LOVEGRASS WILD_OATS WILD_RADISH	
4080038	2	0.80	1.70	0.90	COOPER RD	North	16/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_OATS WILD_RADISH	
4080038	3	1.70	3.18	1.48	COOPER RD	North	16/11/05	MARG	20	0	1	0	0	0	0	1	1	0	0	2	2	3	4	WILD_OATS WILD_RADISH	
4080039	1	0.00	1.80	1.80	ROBERT RD	East	14/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080039	2	1.80	2.10	0.30	ROBERT RD	East	14/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080039	3	2.10	2.60	0.50	ROBERT RD	East	14/11/05	RB boase	20	0	1	0	0	0	0	0	0	0	0	1	2	1	3	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080039	4	2.60	4.20	1.60	ROBERT RD	East	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	1	1	7	7	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080039	5	4.20	4.90	0.70	ROBERT RD	East	14/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080039	6	4.90	5.90	1.00	ROBERT RD	East	14/11/05	RB boase	20	2	2	1	1	0	0	1	1	0	0	2	2	6	6	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080039	7	5.90	6.60	0.70	ROBERT RD	East	14/11/05	RB boase	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_OATS	
4080039	8	6.60	7.60	1.00	ROBERT RD	North	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	0	0	1	1	6	6	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
4080039	9	7.60	8.40	0.80	ROBERT RD	North	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	0	0	0	0	5	5	WILD_OATS AFGHAN_THISTLE	
4080039	10	8.40	8.90	0.50	ROBERT RD	North	14/11/05	RB boase	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_OATS	
4080039	11	8.90	9.80	0.90	ROBERT RD	North	14/11/05	RB boase	20	2	2	1	1	0	0	1	1	0	0	1	1	5	5	WILD_OATS	
4080039	12	9.80	10.30	0.50	ROBERT RD	North	14/11/05	RB boase	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE AFGHAN_THISTLE	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080040	1	0.00	1.78	1.78	BERRING RD	North	14/11/05	RB boase	20	2	2	2	2	2	2	2	2	1	1	2	2	11	11	WILD_RADISH WILD_OATS	
4080040	2	1.78	1.98	0.20	BERRING RD	North	14/11/05	RB boase	20	0	2	0	2	0	2	0	2	0	1	2	2	2	11		
4080040	3	1.98	2.28	0.30	BERRING RD	North	14/11/05	RB boase	20	0	0	0	0	0	0	2	2	0	0	2	2	4	4		
4080040	4	2.28	4.28	2.00	BERRING RD	North	14/11/05	RB boase	20	2	2	1	1	2	2	1	1	1	1	2	2	9	9	WILD_OATS AFRICAN_LOVEGRASS	
4080040	5	4.28	6.38	2.10	BERRING RD	North	14/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS	
4080040	6	6.38	7.28	0.90	BERRING RD	North	14/11/05	RB boase	20	2	2	2	2	1	1	2	2	1	1	1	1	9	9	WILD_OATS	
4080040	7	7.28	7.88	0.60	BERRING RD	North	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080040	8	7.88	8.18	0.30	BERRING RD	North	17/11/05	vanessa	20	2	2	2	2	1	1	2	2	2	2	2	2	11	11	WILD_OATS	
4080040	9	8.18	8.78	0.60	BERRING RD	North	17/11/05	vanessa	20	2	1	1	0	1	0	2	0	2	0	2	2	10	3	WILD_OATS	
4080040	10	8.78	9.28	0.50	BERRING RD	North	17/11/05	vanessa	20	2	2	1	0	1	0	1	1	2	1	2	2	9	6	WILD_OATS	
4080040	11	9.28	11.88	2.60	BERRING RD	North	17/11/05	vanessa	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	AFRICAN_LOVEGRASS PATERSONS_CURSE COUCH WILD_OATS	
4080040	12	11.88	12.28	0.40	BERRING RD	North	17/11/05	vanessa	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_OATS	
4080040	13	12.28	13.28	1.00	BERRING RD	North	17/11/05	vanessa	20	2	2	0	0	0	0	1	1	1	1	2	2	6	6	WILD_OATS	
4080040	14	13.28	14.68	1.40	BERRING RD	North	17/11/05	vanessa	20	2	2	0	0	0	0	1	1	1	1	2	2	6	6	WILD_OATS	
4080040	15	14.68	14.88	0.20	BERRING RD	North	17/11/05	vanessa	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	WILD_RADISH PATERSONS_CURSE WILD_OATS	
4080041	1	0.00	0.44	0.44	DONALD RD	North	23/10/05	katie	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	WILD_OATS	
4080041	2	0.44	0.84	0.40	DONALD RD	North	23/10/05	katie	20	2	2	1	1	1	1	1	1	1	2	2	0	8	7	WILD_OATS	
4080041	3	0.84	2.54	1.70	DONALD RD	North	23/10/05	katie	20	1	1	1	1	1	1	1	0	0	2	2	2	7	7	WILD_RADISH WILD_OATS	
4080041	4	2.54	7.24	4.70	DONALD RD	North	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	1	1	3	3	WILD_RADISH WILD_OATS	
4080041	5	7.24	9.04	1.80	DONALD RD	North	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080041	6	9.04	10.24	1.20	DONALD RD	North	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080041	7	10.24	11.64	1.40	DONALD RD	North	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_RADISH WILD_OATS	
4080041	8	11.64	12.74	1.10	DONALD RD	North	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	WILD_RADISH WILD_OATS PATERSONS_CURSE
4080041	9	12.74	13.14	0.40	DONALD RD	North	9/11/05	MARG	20	1	1	0	0	0	0	2	2	1	1	0	0	4	4	WILD_OATS	
4080041	10	13.14	13.74	0.60	DONALD RD	North	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_OATS	
4080042	1	0.00	0.70	0.70	MORRELL RD	north	9/11/05	MARG	20	1	1	1	1	0	1	2	2	0	0	2	2	6	7	WILD_OATS	
4080042	2	0.70	1.70	1.00	MORRELL RD	East	9/11/05	MARG	20	1	2	1	1	0	0	1	1	0	0	2	2	5	6	WILD_OATS AFRICAN_LOVEGRASS	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
4080042	3	1.70	4.00	2.30	MORRELL RD	East	9/11/05	MARG	20	0	0	0	0	0	0	1	1	0	0	1	1	2	2	WILD_OATS AFRICAN_LOVEGRASS
4080042	4	4.00	4.90	0.90	MORRELL RD	East	9/11/05	MARG	20	1	2	0	0	0	0	1	1	0	0	2	2	4	5	WILD_OATS AFRICAN_LOVEGRASS
4080042	5	4.90	5.40	0.50	MORRELL RD	East	9/11/05	MARG	20	0	0	0	0	0	0	1	1	0	0	1	2	2	3	WILD_OATS AFRICAN_LOVEGRASS
4080042	6	5.40	7.90	2.50	MORRELL RD	East	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	1	2	2	4	5	WILD_OATS AFRICAN_LOVEGRASS
4080043	1	0.70	1.78	1.08	BURNT HILL RD	East	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080043	2	1.78	3.50	1.72	BURNT HILL RD	East	9/11/05	MARG	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080043	3	3.50	5.60	2.10	BURNT HILL RD	East	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
4080043	4	5.60	6.20	0.60	BURNT HILL RD	East	9/11/05	MARG	20	0	1	0	1	0	1	0	1	0	0	2	2	2	6	WILD_RADISH WILD_OATS
4080043	5	6.20	7.30	1.10	BURNT HILL RD	East	9/11/05	MARG	20	2	2	0	0	0	0	1	1	0	0	2	2	5	5	WILD_OATS
4080043	6	7.30	8.30	1.00	BURNT HILL RD	East	9/11/05	MARG	20	0	2	0	1	0	0	1	2	0	0	2	2	3	7	WILD_RADISH WILD_OATS
4080043	7	8.30	9.59	1.29	BURNT HILL RD	East	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
4080044	1	0.00	1.30	1.30	HAYWOOD RD	East	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080044	2	1.30	2.60	1.30	HAYWOOD RD	East	9/11/05	MARG	20	1	1	0	0	0	0	1	1	1	1	1	0	4	3	WILD_RADISH WILD_OATS
4080044	3	2.60	5.10	2.50	HAYWOOD RD	East	9/11/05	MARG	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080045	1	0.00	5.40	5.40	SADLER RD	East	14/11/05	RB boase	20	1	1	0	0	0	0	0	0	1	1	2	1	4	3	WILD_RADISH WILD_OATS
4080045	2	5.40	7.20	1.80	SADLER RD	East	14/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080045	3	7.20	8.90	1.70	SADLER RD	East	14/11/05	RB boase	20	0	2	0	1	0	1	0	2	0	1	2	2	2	9	WILD_RADISH WILD_OATS
4080045	4	8.90	9.60	0.70	SADLER RD	East	14/11/05	RB boase	20	0	2	0	1	0	1	0	1	0	1	1	2	1	8	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
4080045	5	9.60	10.90	1.30	SADLER RD	East	14/11/05	RB boase	20	1	1	1	1	1	1	1	1	1	1	1	2	6	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS
4080045	6	10.90	11.83	0.93	SADLER RD	East	14/11/05	RB boase	20	1	1	0	0	1	1	0	0	0	0	2	2	4	4	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data	
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right
4080046	1	0.00	2.30	2.30	SMITH RD	North	23/10/05	katie	20	1	1	1	1	0	0	1	1	1	1	1	2	2	6	6	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS COUCH
4080046	2	2.30	3.20	0.90	SMITH RD	North	23/10/05	katie	20	0	1	0	0	0	0	0	0	0	0	1	2	2	2	4	WILD_OATS AFRICAN_LOVEGRASS
4080046	3	3.20	7.65	4.45	SMITH RD	North	23/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS
4080047	1	0.00	4.20	4.20	ROWLES RD	West	23/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS WILD_RADISH PATERSONS_CURSE
4080047	2	4.20	4.40	0.20	ROWLES RD	West	23/10/05	katie	20	2	1	1	0	1	0	2	0	2	1	2	2	10	4	WILD_OATS	
4080047	3	4.40	8.40	4.00	ROWLES RD	West	23/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	1	2	2	8	8	PATERSONS_CURSE WILD_OATS WILD_RADISH
4080047	4	8.40	11.00	2.60	ROWLES RD	West	23/10/05	katie	20	0	0	0	0	0	0	0	0	1	0	2	2	3	2	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080048	1	0.00	1.00	1.00	KROE HUT RD	North	30/10/05	katie	20	1	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080048	2	1.00	1.50	0.50	KROE HUT RD	North	30/10/05	katie	20	2	0	0	0	0	0	1	0	2	0	2	2	7	2	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080048	3	1.50	2.60	1.10	KROE HUT RD	North	30/10/05	katie	20	2	2	1	1	1	1	2	2	2	1	2	2	10	9	WILD_OATS PATERSONS_CURSE WILD_RADISH	
4080048	4	2.60	3.80	1.20	KROE HUT RD	North	30/10/05	katie	20	1	1	0	0	0	0	2	2	2	1	2	2	7	6	WILD_OATS AFRICAN_LOVEGRASS PATERSONS_CURSE WILD_RADISH	
4080048	5	3.80	4.40	0.60	KROE HUT RD	North	30/10/05	katie	20	2	2	1	1	1	1	1	1	2	2	0	2	9	9	WILD_RADISH WILD_OATS PATERSONS_CURSE	
4080048	6	4.40	4.60	0.20	KROE HUT RD	North	30/10/05	katie	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	WILD_RADISH WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE	
4080048	7	4.60	4.99	0.39	KROE HUT RD	North	30/10/05	katie	20	0	2	0	0	0	0	0	0	0	1	2	2	2	5	5	WILD_RADISH WILD_OATS PATERSONS_CURSE
4080049	1	0.00	4.10	4.10	BOASE RD	East	17/11/05	RB boase	20	1	1	0	0	0	0	0	0	1	1	1	1	3	3	WILD_RADISH WILD_OATS	
4080050	1	0.00	1.50	1.50	EVANS RD	North	14/11/05	vanessa	20	1	2	0	0	0	0	0	0	0	1	2	2	3	5	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS	
4080050	2	1.50	2.40	0.90	EVANS RD	North	14/11/05	vanessa	20	1	2	0	1	0	1	0	1	1	1	2	1	4	7	WILD_RADISH WILD_OATS	
4080050	3	2.40	4.10	1.70	EVANS RD	North	14/11/05	vanessa	20	1	2	0	1	0	1	0	1	2	2	1	0	4	7	WILD_RADISH WILD_OATS	
4080050	4	4.10	6.00	1.90	EVANS RD	North	14/11/05	vanessa	20	2	2	0	0	0	0	0	0	2	2	1	1	5	5	WILD_OATS	

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data		
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left		Right	Left
4080051	1	0.00	1.30	1.30	DEAN RD	North	2/11/05	MARG	20	2	2	0	0	1	1	2	2	1	1	2	2	8	8	WILD_OATS AFRICAN_LOVEGRASS		
4080051	2	1.30	2.60	1.30	DEAN RD	North	2/11/05	MARG	20	2	2	1	1	0	0	2	2	1	1	2	2	8	8	WILD_OATS AFRICAN_LOVEGRASS		
4080051	3	2.60	3.00	0.40	DEAN RD	North	2/11/05	MARG	20	0	0	0	0	0	0	1	1	0	0	2	2	3	3	WILD_OATS AFRICAN_LOVEGRASS		
4080051	4	3.00	4.00	1.00	DEAN RD	North	2/11/05	MARG	20	1	0	0	0	0	0	2	2	0	0	2	2	5	4	WILD_OATS AFRICAN_LOVEGRASS		
4080051	5	4.00	4.60	0.60	DEAN RD	North	2/11/05	MARG	20	1	1	0	0	0	0	1	1	1	1	2	2	5	5	WILD_OATS AFRICAN_LOVEGRASS		
4080051	6	4.60	5.01	0.41	DEAN RD	North	2/11/05	MARG	20	0	1	0	0	0	0	1	1	0	0	1	2	2	4	4	WILD_OATS	
4080052	1	0.00	1.10	1.10	SAWYER RD	North	14/11/05	vanessa	20	2	2	1	2	2	2	2	2	2	2	1	1	10	11	WILD_OATS		
4080052	2	1.10	1.70	0.60	SAWYER RD	West	14/11/05	vanessa	20	2	2	0	0	1	1	0	0	2	2	1	1	6	6	WILD_OATS		
4080052	3	1.70	2.90	1.20	SAWYER RD	West	14/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	WILD_OATS		
4080063	1	0.00	2.00	2.00	MCLEAN RD	West	17/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	WILD_OATS WILD_RADISH		
4080064	1	0.00	0.60	0.60	SLATER RD	East	17/11/05	vanessa	20	2	2	2	2	2	1	2	1	2	2	1	0	11	8	PATERSONS_CURSE WILD_OATS WILD_RADISH		
4080064	2	0.60	2.00	1.40	SLATER RD	East	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	PATERSONS_CURSE WILD_OATS WILD_RADISH		
4080065	1	0.00	1.90	1.90	LAKE RD	East	17/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	AFRICAN_LOVEGRASS WILD_OATS		
4080065	2	1.90	2.70	0.80	LAKE RD	East	17/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	WILD_RADISH WILD_OATS		
4080065	3	2.70	3.54	0.84	LAKE RD	East	17/11/05	vanessa	20	1	1	0	0	0	0	2	2	1	1	1	1	5	5			
4080066	1	0.00	1.70	1.70	CHITIBIN RD	South	3/11/05	katie	20	1	1	1	1	0	0	0	0	2	2	2	2	6	6	PATERSONS_CURSE WILD_OATS		
4080067	1	0.00	0.30	0.30	HERRIDGE RD	North	17/11/05	r b boase	20	1	1	1	1	0	0	0	0	1	0	2	1	5	3	WILD_OATS		
4080068	1	0.00	1.00	1.00	JONES RD	North	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	0	0	2	2	2	2	WILD_OATS AFRICAN_LOVEGRASS
4080068	2	1.00	1.50	0.50	JONES RD	North	9/11/05	MARG	20	1	1	0	0	0	0	2	2	0	0	0	0	3	3	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH		
4080068	3	1.50	4.60	3.10	JONES RD	North	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH
4080068	4	4.60	5.70	1.10	JONES RD	North	9/11/05	MARG	20	1	1	1	1	1	1	1	1	0	0	2	2	6	6	WILD_OATS AFRICAN_LOVEGRASS		
4080069	1	0.00	0.80	0.80	ANDERSON RD	NW	13/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080069	2	0.80	1.10	0.30	ANDERSON RD	NW	13/11/05	RB boase	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	3	3	AFRICAN_LOVEGRASS AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4080069	3	1.10	4.00	2.90	ANDERSON RD	NW	13/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	AFRICAN_LOVEGRASS AFRICAN_LOVEGRASS WILD_RADISH WILD_OATS
4080070	1	0.00	1.40	1.40	COULTHARD RD	West	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_RADISH WILD_OATS
4080070	2	1.40	2.00	0.60	COULTHARD RD	West	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
4080070	3	2.00	2.60	0.60	COULTHARD RD	West	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	1	2	2	4	5	WILD_RADISH WILD_OATS
4080070	4	2.60	4.10	1.50	COULTHARD RD	West	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
4080072	1	0.00	2.90	2.90	WHITFIELD RD	North	9/11/05	MARG	20	1	1	1	1	1	1	2	2	0	0	2	2	7	7	WILD_OATS AFRICAN_LOVEGRASS
4080072	2	2.90	4.10	1.20	WHITFIELD RD	North	9/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_OATS AFRICAN_LOVEGRASS
4080073	1	0.00	1.00	1.00	DEW RD	West	16/11/05	MARG	20	2	2	0	0	1	1	2	2	1	0	0	2	6	7	WILD_OATS
4080073	2	1.00	2.70	1.70	DEW RD	West	16/11/05	MARG	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	PATERSONS_CURSE
4080074	1	0.00	0.40	0.40	PINKWERRY RD	South	9/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_OATS
4080074	2	0.40	1.40	1.00	PINKWERRY RD	South	9/11/05	MARG	20	2	2	1	1	1	1	2	2	0	0	2	2	8	8	WILD_OATS
4080075	1	0.00	0.40	0.40	SIEGERT RD	North	2/11/05	MARG	20	1	0	1	0	1	0	2	0	1	0	2	2	8	2	WILD_OATS
4080075	2	0.40	1.30	0.90	SIEGERT RD	West	2/11/05	MARG	20	2	2	1	1	1	1	2	2	2	1	2	2	10	9	WILD_OATS
4080076	1	0.00	1.90	1.90	WILLIAMS RD	South	16/11/05	MARG	20	2	2	1	1	1	1	2	2	0	0	2	2	8	8	WILD_OATS
4080077	1	0.00	1.30	1.30	NAMBLING NORTH RD	West	18/11/05	vanessa	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS AFGHAN_THISTLE
4080077	2	1.30	1.60	0.30	NAMBLING NORTH RD	West	18/11/05	vanessa	20	1	1	1	0	1	0	1	0	1	0	1	1	6	2	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS AFGHAN_THISTLE
4080077	3	1.60	2.10	0.50	NAMBLING NORTH RD	West	18/11/05	vanessa	20	2	2	0	0	0	0	0	0	0	0	1	1	3	3	WILD_OATS COUCH WILD_RADISH AFRICAN_LOVEGRASS
4080077	4	2.10	2.50	0.40	NAMBLING NORTH RD	South	18/11/05	vanessa	20	2	2	2	1	1	1	2	1	1	2	1	1	9	8	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS AFGHAN_THISTLE
4080077	5	2.50	3.14	0.64	NAMBLING NORTH RD	West	18/11/05	vanessa	20	2	1	0	0	0	0	0	0	1	0	2	2	5	3	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS
4080078	1	0.00	0.70	0.70	EGAN RD	NW	17/11/05	vanessa	20	2	2	2	2	2	2	2	2	2	2	0	1	10	11	WILD_OATS WILD_RADISH PATERSONS_CURSE
4080079	1	0.00	0.60	0.60	KING RD	South	14/11/05	vanessa	20	2	2	1	1	1	1	2	2	2	2	2	1	6	5	WILD_OATS COUCH
4080079	2	0.60	1.60	1.00	KING RD	South	14/11/05	vanessa	20	2	2	0	0	0	0	0	0	1	1	2	1	5	4	WILD_OATS COUCH WILD_RADISH
4080079	3	1.60	2.00	0.40	KING RD	South	14/11/05	vanessa	20	2	2	0	0	0	0	1	1	1	1	2	1	10	9	WILD_OATS WILD RADDISH

Road#	Sectn#	ODStart	ODFinish	Sectn Length (km)	ROAD NAME	Direction	Date	Observer	Width (m)	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)							Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4080081	1	0.00	1.20	1.20	CLARKE RD	North	8/11/05	katie	20	1	1	1	1	0	0	0	0	2	2	2	2	6	6	WILD_RADISH PATERSONS_CURSE WILD_OATS
4080093	1	0.00	1.30	1.30	HAGBOOM SOUTH RD	West	14/11/05	RB boase	20	2	2	1	1	1	1	1	1	1	1	2	1	8	7	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080093	2	1.30	1.90	0.60	HAGBOOM SOUTH RD	West	14/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	1	2	1	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080093	3	1.90	3.20	1.30	HAGBOOM SOUTH RD	West	14/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080096	1	0.00	0.80	0.80	SHEEN RD	North	4/11/05	katie	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_OATS PATERSONS_CURSE
4080096	2	0.80	3.80	3.00	SHEEN RD	North	4/11/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080096	3	3.80	4.20	0.40	SHEEN RD	North	4/11/05	katie	20	1	0	0	0	0	0	0	0	2	0	2	2	5	2	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080096	4	4.20	4.60	0.40	SHEEN RD	North	4/11/05	katie	20	2	1	1	1	1	1	1	1	2	1	2	2	9	7	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080096	5	4.60	4.80	0.20	SHEEN RD	North	4/11/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080096	6	4.80	5.30	0.50	SHEEN RD	North	4/11/05	katie	20	1	1	1	1	1	1	1	1	2	2	2	2	8	8	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080096	7	5.30	5.50	0.20	SHEEN RD	North	4/11/05	katie	20	1	2	1	1	1	1	2	2	1	1	2	2	8	9	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080096	8	5.50	5.90	0.40	SHEEN RD	North	4/11/05	katie	20	2	2	2	2	2	2	2	2	2	2	2	0	12	10	WILD_OATS PATERSONS_CURSE WILD_RADISH
4080096	9	5.90	6.00	0.10	SHEEN RD	North	4/11/05	katie	20	1	1	1	1	0	0	0	0	1	2	2	0	5	4	
4080101	1	0.00	2.40	2.40	MOUNTJOY RD	East	16/11/05	MARG	20	1	1	0	0	0	0	1	1	0	0	2	2	4	4	WILD_RADISH WILD_OATS
4080101	2	2.40	2.59	0.19	MOUNTJOY RD	East	16/11/05	MARG	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
4080107	1	0.00	1.50	1.50	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	WILD_OATS WILD_RADISH
4080107	2	1.50	2.20	0.70	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	2	0	1	0	1	1	1	0	2	2	0	4	7	WILD_OATS WILD_RADISH
4080107	3	2.20	11.80	9.60	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS WILD_RADISH PATERSONS_CURSE
4080107	4	11.80	13.30	1.50	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	1	0	0	1	1	0	0	0	0	2	2	4	4	WILD_OATS WILD_RADISH PATERSONS_CURSE

Road#	Sectn#	ODStart	ODFinish	Sectn Length (km)	ROAD NAME	Direction	Date	Observer	Width (m)	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)							Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4080107	5	13.30	14.30	1.00	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_OATS WILD_RADISH PATERSONS_CURSE
4080107	6	14.30	15.30	1.00	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	WILD_OATS
4080107	7	15.30	15.90	0.60	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_RADISH WILD_OATS
4080107	8	15.90	17.60	1.70	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	WILD_RADISH WILD_OATS
4080107	9	17.60	19.10	1.50	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS
4080107	10	19.10	19.30	0.20	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	1	1	1	0	0	0	0	1	1	2	2	5	5	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080107	11	19.30	21.30	2.00	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH WILD_OATS AFRICAN_LOVEGRASS
4080107	12	21.30	22.10	0.80	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	1	0	0	0	0	1	1	1	1	2	2	5	5	WILD_RADISH WILD_OATS
4080107	13	22.10	22.70	0.60	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	0	0	0	0	0	1	0	1	0	2	2	5	2	WILD_RADISH WILD_OATS
4080107	14	22.70	25.80	3.10	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	1	0	0	0	0	2	2	1	0	2	2	6	5	WILD_OATS
4080107	15	25.80	26.50	0.70	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	0	1	0	1	0	1	0	1	0	2	2	7	2	WILD_OATS
4080107	16	26.50	27.30	0.80	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	1	1	1	1	1	1	1	1	1	1	2	2	7	7	WILD_OATS
4080107	17	27.30	27.50	0.20	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	2	2	2	2	1	2	2	2	1	2	2	0	10	10	WILD_OATS
4080107	18	27.50	28.90	1.40	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	0	0	0	0	0	0	0	0	0	1	2	2	2	3	WILD_OATS WILD_RADISH
4080107	19	28.90	30.10	1.20	GOOMALLING-CALINGIRI RD	NW	23/10/05	katie	20	2	2	0	0	1	1	0	0	1	1	2	2	6	6	WILD_OATS WILD_RADISH
4080113	1	0.00	0.90	0.90	GOON GOONING RD	North	19/10/05	katie	20	2	2	1	1	1	1	2	2	1	2	2	0	9	8	WILD_OATS
M016	1	0.00	1.20	1.20	GOOMALLING MERREDIN RD	East	17/11/05	RB boase	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS AFRICAN_LOVEGRASS AFGHAN_THISTLE
M016	2	1.20	1.70	0.50	GOOMALLING MERREDIN RD	East	17/11/05	RB boase	20	1	1	0	0	0	0	0	0	0	1	1	0	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS AFRICAN_LOVEGRASS AFGHAN_THISTLE
M016	3	1.70	4.70	3.00	GOOMALLING MERREDIN RD	East	17/11/05	RB boase	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH PATERSONS_CURSE WILD_OATS AFRICAN_LOVEGRASS AFGHAN_THISTLE

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
M016	4	4.70	5.50	0.80	GOOMALLING MERREDIN RD	East	17/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS AFRICAN_LOVEGRASS AFGHAN_THISTLE
M016	5	5.50	6.90	1.40	GOOMALLING MERREDIN RD	East	17/11/05	RB boase	20	1	1	0	0	0	0	1	1	0	0	1	1	3	3	WILD_RADISH PATERSONS_CURSE WILD_OATS AFRICAN_LOVEGRASS
M016	6	6.90	10.70	3.80	GOOMALLING MERREDIN RD	East	17/11/05	RB boase	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	WILD_RADISH PATERSONS_CURSE WILD_OATS COUCH AFRICAN_LOVEGRASS AFGHAN_THISTLE
M032	1	19.53	20.13	0.60	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE
M032	2	20.13	20.73	0.60	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	1	1	1	1	0	0	1	1	1	1	0	0	4	4	WILD_OATS WILD_RADISH
M032	3	20.73	23.43	2.70	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	WILD_OATS WILD_RADISH AFRICAN_LOVEGRASS PATERSONS_CURSE AFGHAN_THISTLE
M032	4	23.43	24.63	1.20	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	1	1	0	0	0	0	0	0	1	1	1	1	3	3	WILD_OATS COUCH WILD_RADISH AFRICAN_LOVEGRASS PATERSONS_CURSE
M032	5	24.63	27.83	3.20	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	1	0	0	0	0	0	0	0	1	0	2	2	4	2	WILD_OATS COUCH WILD_RADISH AFRICAN_LOVEGRASS PATERSONS_CURSE AFGHAN_THISTLE
M032	6	27.83	28.53	0.70	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	2	2	1	1	1	1	1	1	2	0	2	2	9	7	WILD_OATS WILD_RADISH
M032	7	28.53	29.33	0.80	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	2	2	1	1	1	1	1	1	1	1	0	0	6	6	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH COUCH PATERSONS_CURSE
M032	8	29.33	30.93	1.60	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	1	1	1	1	0	0	0	0	1	1	1	1	4	4	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH COUCH PATERSONS_CURSE
M032	9	30.93	32.73	1.80	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	1	0	0	0	0	0	0	0	1	0	2	2	4	2	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH COUCH PATERSONS_CURSE

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
M032	10	32.73	34.83	2.10	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE
M032	11	34.83	35.63	0.80	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	1	1	1	1	0	0	1	1	1	0	0	2	4	5	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE
M032	12	35.63	40.13	4.50	NORTHAM PITHARA RD	North	17/11/05	RB boase	40	1	1	1	1	0	0	1	1	0	0	2	2	5	5	WILD_OATS AFRICAN_LOVEGRASS WILD_RADISH PATERSONS_CURSE
M032	13	40.13	41.53	1.40	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	WILD_OATS COUCH WILD_RADISH PATERSONS_CURSE
M032	14	41.53	44.53	3.00	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	1	1	1	1	0	0	1	1	0	2	1	1	4	6	WILD_OATS COUCH WILD_RADISH PATERSONS_CURSE
M032	15	44.53	45.03	0.50	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	0	2	2	2	1	1	1	1	0	2	0	0	4	8	WILD_OATS
M032	16	45.03	45.53	0.50	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	0	0	0	0	0	0	2	2	0	0	0	0	2	2	
M032	17	45.53	46.13	0.60	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	1	1	0	0	0	0	0	0	0	0	0	0	1	1	WILD_OATS CAPE_TULIP PATERSONS_CURSE
M032	18	46.13	48.03	1.90	NORTHAM PITHARA RD	North	17/11/05	RB boase	20	1	1	1	1	1	1	1	1	2	1	0	1	6	6	WILD_OATS WILD_RADISH PATERSONS_CURSE
M032	19	0.00	0.70	0.70	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	2	0	2	0	2	0	2	1	0	2	10	5	WILD_RADISH WILD_OATS PATERSONS_CURSE
M032	20	0.70	1.30	0.60	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	2	1	2	1	2	2	2	1	0	2	10	9	AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE
M032	21	1.30	2.40	1.10	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	0	0	1	1	1	1	2	1	2	2	8	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	22	2.40	3.40	1.00	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	1	1	0	1	0	1	0	1	1	1	1	1	3	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE
M032	23	3.40	5.70	2.30	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	1	1	1	8	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE

Road#	Sectn#	ODStart	ODFinish	Sectn Length	ROAD NAME	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	
M032	24	5.70	6.60	0.90	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	1	1	1	8	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	25	6.60	10.20	3.60	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	2	1	1	8	8	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	26	10.20	11.90	1.70	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	0	1	1	2	1	2	1	1	1	10	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	27	11.90	13.00	1.10	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	1	1	0	1	0	1	0	2	1	1	1	8	3	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	28	13.00	13.70	0.70	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	0	0	1	1	1	1	1	1	1	1	6	6	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	29	13.70	14.50	0.80	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	0	1	0	1	0	1	2	1	1	7	5	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE
M032	30	14.50	15.20	0.70	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	1	1	1	1	2	2	2	1	0	8	8	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE
M032	31	15.20	16.00	0.80	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	1	1	1	1	1	2	1	1	1	8	7	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE
M032	32	16.00	16.70	0.70	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	0	1	1	1	0	2	1	1	1	8	5	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	33	16.70	18.30	1.60	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	2	1	2	2	2	1	2	2	1	1	11	9	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE

Road#	Sectn#	ODStart	ODFinish	Sectn Length (km)	ROAD NAME	Direction	Date	Observer	Width (m)	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)							Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
M032	34	18.30	19.40	1.10	NORTHAM PITHARA RD	North	18/11/05	vanessa	20	2	2	1	0	1	1	1	0	2	1	1	1	8	5	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	35	19.40	21.00	1.60	NORTHAM PITHARA RD	North	18/11/05	vanessa	40	2	2	1	1	1	1	1	1	2	2	1	1	8	8	WILD_RADISH AFRICAN_LOVEGRASS WILD_OATS PATERSONS_CURSE
M032	36	69.11	70.11	1.00	NORTHAM PITHARA RD	North	16/11/05	MARG	40	2	2	0	0	0	0	2	2	0	0	2	2	6	6	WILD_RADISH WILD_OATS PATERSONS_CURSE
M032	37	70.11	71.11	1.00	NORTHAM PITHARA RD	North	16/11/05	MARG	40	1	1	0	0	0	0	1	1	1	0	2	2	5	4	WILD_RADISH WILD_OATS PATERSONS_CURSE
M032	38	71.11	72.11	1.00	NORTHAM PITHARA RD	North	16/11/05	MARG	40	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_RADISH WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE
M032	39	72.11	72.71	0.60	NORTHAM PITHARA RD	North	16/11/05	MARG	40	1	1	2	0	1	1	2	2	1	1	0	0	7	5	WILD_OATS
M032	40	72.71	74.11	1.40	NORTHAM PITHARA RD	North	16/11/05	MARG	40	1	1	0	0	0	0	2	2	0	0	2	0	5	3	AFRICAN_LOVEGRASS WILD_OATS
M032	41	74.11	74.81	0.70	NORTHAM PITHARA RD	North	16/11/05	MARG	40	0	0	0	0	0	0	2	2	0	1	0	0	2	3	WILD_OATS
M032	42	74.81	76.11	1.30	NORTHAM PITHARA RD	North	16/11/05	MARG	40	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_OATS
M032	43	76.11	81.81	5.70	NORTHAM PITHARA RD	North	16/11/05	MARG	40	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_RADISH WILD_OATS
M060	1	0.00	0.70	0.70	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	WILD_OATS
M060	2	0.70	1.00	0.30	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	0	0	0	0	0	0	1	0	2	2	4	3	WILD_OATS
M060	3	1.00	1.40	0.40	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	0	1	0	0	0	0	0	0	0	1	2	2	2	4	WILD_OATS WILD_RADISH
M060	4	1.40	7.00	5.60	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	1	1	0	0	0	0	1	0	2	2	5	4	WILD_OATS WILD_RADISH
M060	5	7.00	7.50	0.50	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	0	1	0	1	0	1	0	2	0	2	2	9	2	WILD_OATS WILD_RADISH
M060	6	7.50	8.60	1.10	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	2	1	2	1	2	1	2	1	2	2	2	8	12	WILD_OATS WILD_RADISH
M060	7	8.60	8.80	0.20	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	0	1	0	1	0	1	0	2	0	2	2	9	2	WILD_OATS WILD_RADISH AFGHAN_THISTLE
M060	8	8.80	13.40	4.60	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	WILD_OATS WILD_RADISH
M060	9	13.40	14.00	0.60	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	2	1	2	0	1	1	2	0	2	2	2	5	11	WILD_OATS WILD_RADISH
M060	10	14.00	14.80	0.80	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	1	0	0	0	1	1	1	1	2	2	6	5	WILD_OATS WILD_RADISH

Road#	Sectn#	ODStart	ODFinish	Sectn Length (km)	ROAD NAME	Direction	Date	Observer	Width (m)	Native Vegetation		Extent of Vegetation		# Native Plant		Weeds		Value as Biol.		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)							Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
M060	11	14.80	15.20	0.40	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	2	1	2	1	2	1	2	1	2	2	2	8	12	WILD_OATS WILD_RADISH
M060	12	15.20	16.00	0.80	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	1	1	0	0	1	1	0	0	2	2	5	5	WILD_OATS
M060	13	16.00	17.40	1.40	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	1	1	0	1	1	1	1	1	1	2	2	8	6	WILD_OATS AFGHAN_THISTLE
M060	14	17.40	17.60	0.20	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	1	2	0	2	0	2	0	2	1	2	2	12	4	WILD_OATS AFRICAN_LOVEGRASS PATERSONS_CURSE
M060	15	17.60	18.20	0.60	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	1	2	1	2	0	2	0	2	0	2	2	12	4	WILD_OATS AFRICAN_LOVEGRASS PATERSONS_CURSE
M060	16	18.20	19.40	1.20	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	1	1	0	0	1	1	1	1	2	2	6	6	WILD_OATS AFRICAN_LOVEGRASS PATERSONS_CURSE
M060	17	19.40	19.60	0.20	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	2	1	1	0	1	0	1	0	1	0	2	2	8	3	WILD_OATS WILD_RADISH
M060	18	19.60	28.00	8.40	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	0	0	0	0	1	1	1	0	2	2	5	4	WILD_OATS WILD_RADISH PATERSONS_CURSE
M060	19	28.00	28.40	0.40	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	0	0	0	0	0	0	1	0	0	2	2	3	WILD_OATS WILD_RADISH PATERSONS_CURSE
M060	20	28.40	28.70	0.30	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	0	0	0	0	2	2	0	0	2	2	5	5	WILD_OATS WILD_RADISH PATERSONS_CURSE
M060	21	28.70	29.00	0.30	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	2	0	1	0	1	0	1	0	1	2	0	3	6	
M060	22	29.00	29.30	0.30	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	0	0	0	0	1	1	2	2	0	0	4	4	WILD_OATS
M060	23	29.30	29.80	0.50	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_OATS PATERSONS_CURSE
M060	24	29.80	31.20	1.40	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	1	1	1	1	0	0	1	2	0	0	2	2	5	6	WILD_OATS PATERSONS_CURSE
M060	25	31.20	32.00	0.80	GOOMALLING TOODYAY RD	West	25/10/05	katie	20	0	0	0	0	0	0	2	2	1	0	2	2	5	4	WILD_OATS PATERSONS_CURSE AFGHAN_THISTLE

638.41

Appendix

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APPENDIX 3

Road names and lengths: Shire of Goomalling

(Source: Main Roads WA 2004)

Road Number	Road Name	Road length (km)
4080098	ABATTOIR RD	2.20
4080069	ANDERSON RD	4.00
4080010	BEBAKINE RD	9.74
4080015	BEECROFT RD	12.11
4080003	BEJOORDING RD	4.96
4080027	BERRING EAST RD	3.41
4080040	BERRING RD	14.88
4080049	BOASE RD	4.12
4080008	BOLGART EAST RD	14.56
4080021	BOTHERLING EAST RD	14.00
4080055	BOWEN ST	0.32
4080025	BROOKSBANK RD	4.67
4080028	BURABADJI EAST RD	4.51
4080029	BURABADJI RD	7.08
4080043	BURNT HILL RD	9.59
4080020	BYBERDING RD	12.87
4080118	CACTI RD	2.50
4080024	CARTER RD	8.61
4080095	CEMETERY RD	0.80
4080066	CHITIBIN RD	1.69
4080081	CLARKE RD	1.21
4080038	COOPER RD	3.18
4080108	CORAL GUM WAY	0.84
4080070	COULTHARD RD	4.20
4080051	DEAN RD	5.01
4080073	DEW RD	2.57
4080086	DICK ST	0.16
4080041	DONALD RD	13.74
4080006	DOWERIN KONNONGORING	16.30
4080116	EATON RD EAST	0.92
4080061	EATON ST	0.72
4080078	EGAN RD	0.64
4080050	EVANS RD	5.95
4080036	FAIRLIE RD	3.22
4080054	FORREST ST	0.90
4080059	FORWARD ST	0.48
4080019	GABBYQUOIQUOI RD	9.82
4080087	GEORGE ST	0.34
4080016	GLATZ RD	13.78
4080001	GOOMALLING MECKERING RD	22.70
	GOOMALLING TOODYAY RD	
	GOOMALLING WYALKATCHEM RD	
4080107	GOOMALLING-CALINGIRI RD	30.70
4080113	GOON GOONING RD	0.94
4080105	GRANGE ST	0.50
4080037	GRIFFITH WHALEY RD	10.11
4080009	HADDRILL RD	3.38
4080093	HAGBOOM SOUTH RD	3.22
4080044	HAYWOOD RD	5.33
4080089	HAYWOOD ST	0.24
4080094	HELENA ST	0.15
4080067	HERRIDGE RD	1.45
4080062	HIGH ST	0.48
4080057	HODDY ST	0.89
4080022	HUGHES RD	2.49
4080035	HULONGINE RD	6.46
4080060	JAMES ST	0.92
4080011	JENNACUBBINE EAST RD	8.55
4080068	JONES RD	5.63
4080080	KALGUDDER WEST RD	5.15
4080079	KING RD	2.03
4080005	KONNONGORING WEST RD	18.27

4080048	KROE HUT RD	4.99
4080110	KUNSIA WAY	0.20
4080065	LAKE RD	3.54
4080018	LAWLER RD	7.40
4080026	LEESON RD	7.73
4080083	LOCKYER ST	0.42
4080013	LONG FORREST RD	16.86
4080034	LORD RD	6.44
4080085	MAHER RD	0.26
4080117	MARDINGDALE LANE	0.60
4080063	MCLEAN RD	2.01
4080092	METCALF RD	4.35
4080042	MORRELL RD	7.90
4080101	MOUNTJOY RD	2.59
4080077	NAMBLING NORTH RD	3.14
M032	NORTHAM PITHARA RD	
4080007	OAK PARK RD	16.86
4080014	PATTERSON RD	9.25
4080111	PEAR TREE DRIVE	1.17
4080074	PINKWERRY RD	1.51
4080030	PRYOR RD	6.84
4080053	QUINLAN ST	1.11
4080039	ROBERT RD	10.34
4080017	ROSSMORE RD	10.20
4080047	ROWLES RD	11.00
4080045	SADLER RD	11.83
4080112	SALMON GUM WAY	0.52
4080052	SAWYER RD	2.90
4080097	SAWYER RD	0.88
4080031	SCHELL RD	8.69
4080096	SHEEN RD	6.05
4080114	SHORT ST	0.09
4080075	SIEGERT RD	1.29
4080064	SLATER RD	1.93
4080115	SLATER RD NORTH	0.44
4080082	SLATER ST	0.61
4080046	SMITH RD	7.65
4080091	SMITH ST	0.10
4080032	SPARK RD	6.28
4080106	THROSSELL ST	0.33
4080012	TYNDALL RD	14.76
4080023	UCARTY RD	16.03
4080099	UN NAMED	0.80
4080100	UN NAMED	0.70
4080102	UN NAMED	2.11
4080103	UN NAMED	1.58
4080104	UN NAMED	0.89
4080090	WATERHOUSE WY	0.34
4080071	WATSON RD	0.76
4080088	WHITE ST	0.72
4080072	WHITFIELD RD	4.18
4080058	WILLIAM ST	0.74
4080076	WILLIAMS RD	2.09
4080056	WOLLYAM ST	0.48
4080033	WONGAMINE RD	2.50
4080002	YARRAMONY RD	6.20
4080109	YORK GUM WAY	1.19

Appendix

4

APPENDIX 4

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

Note: not a comprehensive list and may not be the most up to date information available.

* = Weed species

P = Priority species

R = Rare species

- Acacia brumalis* Maslin
Acacia fauntleroyi (Maiden) Maiden & Blakely
Acacia lirellata subsp. *compressa* Maslin & A.R.Chapman P2
Acacia phaeocalyx Maslin P3
Acacia pulchella var. *goadbyi* (Domin) Maslin
Acacia restiacea Benth.
Allocasuarina campestris (Diels) L.A.S.Johnson
Allocasuarina huegeliana (Miq.) L.A.S.Johnson
Anthotroche pannosa Endl.
Barbula calycina
Beaufortia squarrosa Schauer
Borya sphaerocephala R.Br.
Bossiaea sp. 1 Hyden (T.R. Lally & B.J. Lepschi TRL 1137) PN
**Bromus rubens* L.
Bryum campylothecium
Caladenia radialis R.S.Rogers
Calothamnus quadrifidus R.Br.
Calothamnus sanguineus Labill.
Calycopeplus paucifolius (Klotzsch) Baill.
Calytrix depressa (Turcz.) Benth.
Campylopus bicolor
Campylopus introflexus
Cephaloziella arctica subsp. *subantarctica*
Chamaescilla spiralis (Endl.) Benth.
Chamelaucium pauciflorum subsp. *thryptomenioides* (D.A.Herb.) N.G.Marchant & Keighery ms
**Chondrilla juncea* L.
Cladia aggregata (Sw.) Nyl.
Cyanicula gemmata (Lindl.) Hopper & A.P.Br.
Daviesia cardiophylla x *umbonata*
Daviesia hakeoides subsp. *subnuda* (Benth.) Crisp
Didymanthus roei Endl.
Dodonaea viscosa subsp. *angustissima* (DC.) J.G.West
Drosera heterophylla Lindl.
Drosera macrantha Endl. subsp. *macrantha*
Dryandra fraseri R.Br. var. *fraseri*
Dryandra sessilis (Knight) Domin var. *sessilis*
Eccremidium pulchellum
**Emex australis* Steinh.
Eremaea pauciflora (Endl.) Druce
**Erodium botrys* (Cav.) Bertol.
Erodium cygnorum Nees
Eucalyptus arachnaea Brooker & Hopper subsp. *arachnaea*
Eucalyptus kochii Maiden & Blakely subsp. *kochii*
Eucalyptus loxophleba Benth. subsp. *loxophleba*
Eucalyptus pyriformis Turcz.
Eucalyptus salmonophloia F.Muell.
Eucalyptus subangusta (Blakely) Brooker & Hopper subsp. *subangusta*
Fossombronia sp.
Gastrolobium callistachys Meisn. P4
Geleznovia verrucosa Turcz. subsp. *verrucosa* ms
Grevillea endlicheriana subsp. *Wongan Hills* (G.J. Keighery 15351) PN
Grevillea umbellulata Meisn.
Grimmia laevigata
Guichenotia glandulosa C.F.Wilkins P1
Guichenotia macrantha Turcz.
Gyrostemon subnudus (Nees) Baill.
Hakea petiolaris subsp. *trichophylla* Haegi
Hakea trifurcata (Sm.) R.Br.
Isotoma scapigera (R.Br.) G.Don
Kunzea pulchella (Lindl.) A.S.George
Leptospermum erubescens Schauer
Lysiosepalum rugosum Benth.
Melaleuca cf. *spicigera*
Melaleuca conothamnoides C.A.Gardner
Melaleuca coroncarpa D.A.Herb.
Melaleuca leptospermoides Schauer
Melaleuca macronychia Turcz. subsp. *macronychia*
Melaleuca orbicularis Craven
Melaleuca radula Lindl.
Microcorys eremophiloides Kenneally R
Nuytsia floribunda (Labill.) G.Don
Platysace cirrosa Bunge
**Poa infirma* Kunth
Podolepis capillaris (Steetz) Diels
Podotheca gnaphalioides Graham
**Polygonum aviculare* L.
Regelia ciliata Schauer
Riccia limbata
Rosulabryum campylothecium
Sarcozona praecox (F.Muell.) S.T.Blake
Scholtzia involucrata (Endl.) Druce
Siphula ? *coriacea*

Thelymitra villosa Lindl.
Thelymitra vulgaris Jeanes
Thryptomene australis Endl. subsp. *australis*
Thryptomene costata Rye & Trudgen
Tribonanthes longipetala Lindl.
**Trifolium subterraneum* L.
Verreauxia verreauxii (de Vriese) Carolin P4
Verticordia cespitosa
Verticordia eriocephala A.S.George
Verticordia hughanii F.Muell. R
Verticordia mitchelliana C.A.Gardner
Verticordia sp.
Wurmbea graniticola T.Macfarlane
Xanthoparmelia sp.

Appendix

5

APPENDIX 5

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

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates:
-33.9500, 116.600 and -31.500, 117.000

Note: not a comprehensive list.

* represents an introduced species.

BIRD SPECIES

Accipitridae	<i>Aquila morphnoides morphnoides</i> <i>Elanus caeruleus axillaris</i>	Australian Black-shouldered Kite
Corvidae	<i>Corvus coronoides perplexus</i>	
Dicruridae	<i>Rhipidura leucophrys</i>	Willie Wagtail
Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon
Halcyonidae	<i>Dacelo novaeguineae</i>	Laughing Kookaburra
Pachycephalidae	<i>Pachycephala rufiventris rufiventris</i>	Rufous Whistler
Pardalotidae	<i>Pardalotus striatus</i> <i>Pardalotus striatus westraliensis</i>	Striated Pardalote
Psittacidae	<i>Platycercus zonarius</i> <i>Platycercus zonarius zonarius</i> <i>Polytelis anthopeplus anthopeplus</i>	Australian Ringneck Parrot Regent Parrot
Scolopacidae	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper)
Strigidae	<i>Ninox novaeseelandiae</i>	Boobook Owl

MAMMAL SPECIES

Canidae	* <i>Vulpes vulpes</i>	Red Fox (Feral)
Dasyuridae	<i>Dasyurus geoffroii</i> <i>Sminthopsis crassicaudata</i>	Western Quoll, Chuditch Fat-tailed Dunnart
Vespertilionidae	<i>Chalinolobus morio</i>	Chocolate Wattled Bat

REPTILE SPECIES

Agamidae	<i>Pogona minor minor</i>	Western Bearded Dragon
Elapidae	<i>Pseudechis australis</i> <i>Pseudonaja modesta</i> <i>Pseudonaja nuchalis</i>	Mulga Snake Ringed Brown Snake Gwardar
Gekkonidae	<i>Diplodactylus pulcher</i> <i>Gehyra variegata</i> <i>Oedura reticulata</i>	Beautiful Gecko Variegated Tree Dtella Reticulated Velvet Gecko
Scincidae	<i>Cryptoblepharus plagiocephalus</i> <i>Ctenotus pantherinus pantherinus</i>	Fence or Wall Skink Leopard Skink

	<i>Lerista gerrardii</i>	
	<i>Menetia greyii</i>	Common Dwarf Skink
	<i>Tiliqua rugosa rugosa</i>	Southwestern Bobtail
Typhlopidae	<i>Ramphotyphlops waitii</i>	
Varanidae	<i>Varanus gouldii</i>	Gould's Sand Monitor
	<i>Varanus tristis tristis</i>	Black-headed Monitor

FISH SPECIES

Percichthyidae	<i>Bostockia porosa</i>
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AMPHIBIA SPECIES

Myobatrachidae	<i>Heleioporus albopunctatus</i>	Western Spotted Frog
	<i>Pseudophryne guentheri</i>	Crawling Frog, Günther's Toadlet

Appendix

6



ROADSIDE CONSERVATION COMMITTEE

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

Preamble

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

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

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

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

Legislation

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

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

There are two types of licences that apply to the taking of protected flora from Crown land - Commercial Purposes Licences where the flora is being taken for any commercial purpose, and Survey of Roadside Conservation Values in the Shire of Goomalling

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

These licences are issued by DEC. In issuing a licence, DEC is required to be assured that the activity will not compromise the conservation of the flora. In determining this, DEC will seek advice from the land manager for which the application relates to determine the potential impact of the activity, and how the activity relates to the management objectives being applied to that land.

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

Commercial Wildflower Harvesting

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

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

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

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

Seed Collection

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

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

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

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

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

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

Timber Harvesting from Roadsides.

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

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

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

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

Guidelines For Harvesting On Roadsides

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

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

Appendix

7



ROADSIDE CONSERVATION COMMITTEE

Guidelines for the Nomination and Management of Flora Roads

Introduction

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



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

Principle Conservation Values of Flora Roads:

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

The following information would also be useful:

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

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

Establishment of a Flora Road

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

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

Management Implications

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

Part 16 of the RCC *Roadside Manual* details the establishment and management of Flora Roads. The RCC's *Guidelines for Managing Special Environment Areas in Transport Corridors* and the *Roadside Handbook* also provide information on Flora Road establishment.

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

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

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

Tourism Implications

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

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

Flora Road Register

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

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