Roadside Vegetation and Conservation Values in the Shire of Wagin

Walker Road, Wagin.

Photo by S. Thompson

December 2005

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 Wagin. This report primarily provides detailed results of the roadside survey, and accompanying management recommendations, and also briefly describes the natural environment in Wagin, legislative considerations and threats to conservation values.

Aware of the need to conserve roadside remnants, the Shire of Wagin, Landcare, local community members and the Wagin Land Conservation District Committee (LCDC) liaised with the Roadside Conservation Committee (RCC) in 2004 to survey roadsides in their Shire. Surveys to assess the conservation values of roadside remnants were conducted between October 2004 and July 2005. The majority, 82.1%, of the Shire's 878.0 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 five nominated weed species were also recorded, along with the presence of salt affected roadsides, and mapped onto separate clear overlays.

The survey indicated that high conservation value roadsides covered 8.3% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 40.7%. Medium-low and low conservation value roadsides occupied 31.1% and 20.0%, 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:

- identifying degraded areas for strategic rehabilitation or in need of specific management techniques and weed control programs;
- prioritising roadside vegetation protection and/or rehabilitation programs;
- 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 Wagin to utilise the Roadside Conservation Value map into 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.

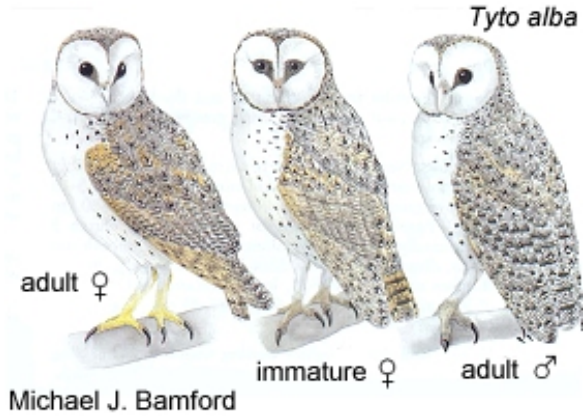
PART A

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.

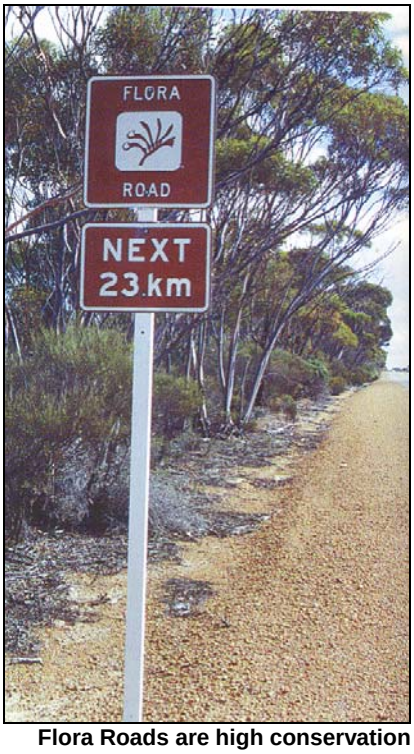


The Barn Owl (Tyto alba) has been recorded in the Shire of Wagin.

Photo by M.J Bamford, Photo used with the permission of the WA Museum, FaunaBase

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



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

- assist with erosion and salinity control, and not only in the land adjoining the road reserve; and
- provide a valuable source of seed for regeneration projects. This is especially pertinent to shrub species, as clearing and grazing beneath farm trees often removes this layer. Approval of the local Shire and a Conservation and Land Management (CALM) permit are required prior to collection. Guidelines for seed and timber harvesting can be found in Appendix 6.

2.0 What are the Threats?

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, Beeston, and Hopkins 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, but the extent of changes is dependent on a number of factors such as:

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

The RCC's 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 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 Bush Fires Board should be called in to arbitrate.

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

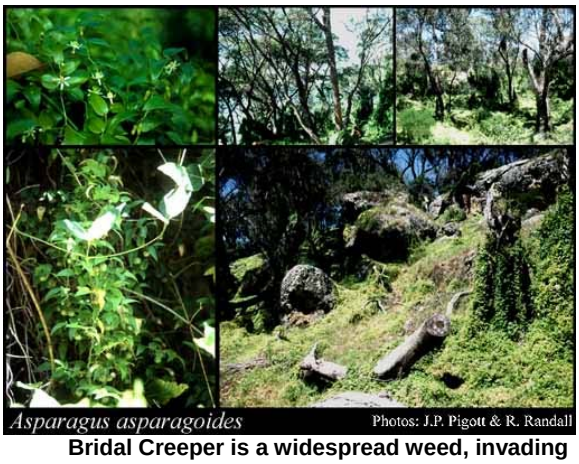
Weeds are generally disturbance opportunists and as such the road verge often provides a vacant niche which is easily colonised. Their establishment can impinge on the survival of existing native plants, increase flammability of the vegetation and interfere with the engineering structure of the road. The effect of weed infestations on native plant populations can be severe, often with flow on effects for native fauna such as diminished habitat and/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 36 weed species in the Shire of Wagin (Appendix 4). The roadside survey recorded populations of five significant weeds, and their locations were mapped by the RCC. The five nominated weeds were:

- Cape Tulip (*Moraea flaccida* and *Moraea miniata*);
- Bridal Creeper (*Asparagus asparagoides*);
- Wild Radish (*Raphanus raphanistrum*);
- Soursob (*Oxalis pes-caprae*); and
- Perennial Veldt Grass (*Ehrharta calycina*).

Roadside populations of these weeds can be observed on the weed overlays provided with the Wagin Roadside Conservation Value map (2005). 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.

Wild Radish is a widespread major weed of winter crops, and is toxic to stock. It is common on wasteland and disturbed land, including roadsides in the Shire of Wagin.
Photography by L.Fontanini, K.C. Richardson & J.F. Smith. Photo used with the permission of the WA Herbarium, CALM
http://florabase.calm.wa.gov.au/help/photos#reuse



Bridal Creeper is a widespread weed, invading native vegetation, smothering plants and threatening biodiversity.
Photography by J.P. Pigott & R. Randall. Photo used with the permission of the WA Herbarium, CALM
http://florabase.calm.wa.gov.au/help/photos#reuse

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

Photography by R. Knox and K.C. Richardson. Photo used with the permission of the WA Herbarium, CALM
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 crop vegetation, 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 to the 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 19,800 km of roads, 1,600 km 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 4,000 km (or 5%) of roads in the South West Land Division of Western Australia are at threat of being degraded by the effects of rising water tables and salinity.

Based on figures supplied by the Department of Agriculture WA for the *Salinity Investment Framework Interim Report* (2003), Table 1 shows that approximately 6.6%, or 54 km of roads in the Shire of Wagin are potentially under threat from salinity.

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
Narrogin	757.63	0.38	27.93	2.88	12.68	43.85	10.66
Wickepin	848.27		32.93	0.70	12.73	46.35	5.46
Dumbleyung	1,020.80		49.30	5.10	4.03	58.43	5.72
Woodanilling	504.96	0.83	21.63	1.83	8.38	32.65	6.47
West Arthur	884.85	1.45	30.00	1.98	13.75	47.18	5.33
Wagin	817.68		43.90	4.03	6.05	53.98	6.60
Williams	580.51	0.48	8.00	0.68	7.00	16.15	2.78

Table 1. Road lengths potentially affected by salinity in the Shires of Narrogin, Wickepin, Dumbleyung, Woodanilling, West Arthur, Wagin and Williams.
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

Aware of the threat salinity poses to the Shire, the 2004/05 Wagin roadside survey was designed so that roadside surveyors could record the presence of salt affected roadsides as an additional attribute. The location of salt affected roadsides appears as a clear overlay accompanying the Shire of Wagin Roadside

Conservation Value map (2005). The data relating to occurrence of salt affected roadsides in Wagin, as observed by the roadside surveyors, is also presented in Part C of this report.

3.0 Legislative Requirements

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

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

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

State legislation:

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

Commonwealth legislation:

- *Environment Protection and Biodiversity Conservation Act* 1999

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

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

This assessment process is designed to provide a more comprehensive and stringent land clearing control system. There are two land clearing permits available, an area permit and a purpose permit. Where clearing is for a once-off clearing event such as pasture clearing or an agricultural development for example, an area permit is required. Where ongoing clearing is necessary as part of a maintenance program for road or railway reserves for example, a purpose permit is needed. Shire road maintenance activities are currently exempt to the width and height previously cleared for that purpose (Schedule 2 of the Clearing Regulations 2004). However this exemption expires 8th July 2006. Please contact the Department of Environment's Native Vegetation Protection Team for information regarding clearing permit requirements for road maintenance activities post 8th July 2006.

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

4.0 Environmentally Sensitive Areas

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

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

Environmentally Sensitive Areas can be delineated by the use of site markers. Please see the RCC publication *Guidelines for Managing Special Environmental Areas in Transport Corridors* for design and placement of ESA markers. Markers of a uniform shape and colour will make recognition easier for other authorities using road reserves. 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.

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

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 by the appropriate person prior to any work being initiated in the area. This will ensure that inadvertent damage does not occur

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.

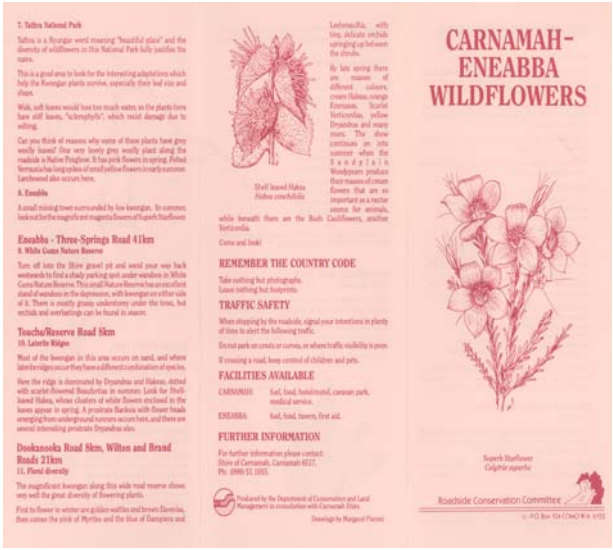
Roadsides are one of the most accessible places for tourists to view wildflowers.
Photo by CALM

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

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 that this is not overlooked, it is suggested that areas declared as Flora Roads be included in the Shire's *Environmentally Sensitive Area Register.*

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

- promoting the road by means of a small brochure or booklet;
- showing all Flora Roads on a map of the region or State; 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 WAGIN

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 southwest are endemic.

The WA Herbarium lists over 512 species of plants present in the Shire of Wagin. The most prolific genera are Eucalyptus (45 spp), Acacia (31 spp), Caladenia (25 spp), Dryandra (15 spp), Verticordia (13 spp), Melaleuca (11 spp), Petrophile (11 spp), and Stylidium (10 spp). The complete list of recorded flora can bee seen in Appendix 4 of this report.

The Smooth-Lipped Spider Orchid is a rare native plant, which can be found in the Shire of Wagin.
Photography by G.Brunnbauer, W.M. Cusack, L & M Greeve and SJ Patrick.
Photo used with the permission of the WA Herbarium, CALM
http://florabase.calm.wa.gov.au/help/photos#reuse

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 (ESA's) and are delineated by yellow stakes with an identification plate welded on. It is suggested that the RCC publication *Guidelines for Managing Special Environment Areas in Transport Corridors* is used as a guideline for managing these sites. It is the responsibility of the road manager to ensure these markers are installed, and guides for this are available from the Roadside Conservation Committee. For information regarding DRF, contact the CALM Flora Officer for the Narrogin District. If roadworks are to be carried out near DRF sites, it is advisable to contact CALM at least six weeks in advance.

Currently (as at August 2005), four locations of declared rare and priority flora are known to occur within roadsides in the Shire of Wagin. Three of these sites are road verges vested in the Shire, and 1 is vested in Main Roads. In total, there are three species of Declared Rare and Priority Flora on roadsides in the Shire, which are:

- *Caladenia integra;*
- *Banksia oligantha;* and
- *Lechenaultia pulvinaris.*

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

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

The Reticulated Velvet Gecko can be found in the Shire of Wagin.
Photo by B. G. Bush, Photo used with the permission of the WA Museum, FaunaBase

3.0 Fauna

The Western Australian Museum records approximately 105 species of fauna from the Wagin area (Appendix 5). WA Museum fauna records comprise specimen records, museum collections and observations from 1850 to present; therefore it is intended to act only as a general representation of the fauna in the area. Of the fauna species recorded in the Wagin area, there were 37 bird, 10 amphibia, 17 mammal, 3 fish and 38 reptile species.

A number of the fauna species recorded from Wagin 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 Wagin 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 CALM, ten species of threatened and priority fauna have been recorded or sighted throughout the Shire of Wagin, and these are listed below.

- **Chuditch *(Dasyurus geoffroii)***

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

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

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

- **Western Rosella *(Egernia stokesii badia)***

This species occurs in semi-arid scrubs and woodlands of Shark Bay and the Northern Wheatbelt, sheltering in hollow logs and behind bark of fallen trees.

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


The quenda has been found in the Shire of Wagin.
Information from Mammals of the South-West by B.J. Brown and C. Thomson. Available at; www.margaret-river-online.com.au

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

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

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

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

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

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

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

- **Tammar Wallaby *(Macropus eugenii derbianus)***

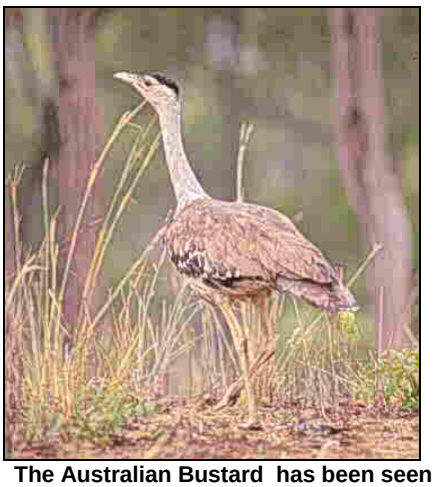
This species prefers thickets of Melaleuca, Sheoak or other large shrubs associated with grassland.

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

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

- **Quenda *(Isoodon obesulus fusciventer)***

This species prefers areas with dense understorey vegetation, particularly around swamps and along watercourses, that provides ample protection from predators.



The Australian Bustard has been seen in the Shire of Wagin.
Photo from James Cook University, Department of Zoology and Tropical Ecology.
Available at; www.jcu.edu.au

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

4.0 Remnant Vegetation Cover

Only 8.2% of the original native vegetation remains in the Shire of Wagin, 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. With less than 10% vegetation cover remaining in Wagin, this is considerably low, and this problem is magnified when considering the surrounding Shires that also show similar low percentages of remaining vegetation cover (apart from West Arthur and Williams). What is left of these remnants can, and will, easily and quickly be depleted if proactive measures are not taken to manage this priceless resource for future generations.

Shire	Total Area (ha)	Area inside Clearing Line (ha)	Vegetation Cover Remaining (inside clearing line)	
			(ha)	(%)
Narrogin	164,063	164,063	22,369	13.6
Wickepin	202,347	202,347	15,120	7.5
Dumbleyung	253,816	253,816	20,003	9.5
Woodanilling	111,769	111,769	14,367	12.9
West Arthur	282,614	282,614	84,226	29.8
Wagin	193,910	193,910	15,847	8.2
Williams	228,482	228,482	75,562	33.1

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

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

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

PART C

ROADSIDE SURVEYS IN THE SHIRE OF WAGIN

1.0 Introduction

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

The majority (878.0km, or 82.1%) of the Shire of Wagin's 721.0km of roads were surveyed and then assessed to determine the conservation status of the road reserves. Fieldwork was carried out from October 2004 to July 2005. The enthusiastic efforts of the volunteer roadside surveyors and the support provided by Council and Shire staff ensured that this project was successfully completed. The roadside surveyors were:

- Mark Riley
- Bert Williams
- Dana Price
- Horace Williams
- Judith Kershaw
- Arthur Kershaw
- Nathan Krakover
- Terry Davey
- Steven Williams
- Sally Thompson

1.1 Methods

Roadside surveys were undertaken in a vehicle, with two or three people per vehicle. The passenger recorded all the roadside survey data using the RCC's iPAQ personal computers and, when these were not available, used the standard paper survey sheets (Appendix 1). At the end of the survey, the IPAQs and survey sheets were sent back to the RCC for analysis and mapping.

The methods to assess and calculate the conservation value of the roadside reserves are described in *Assessing Roadsides: A guide for Rating Conservation Value* (Jackson, 2002). The process involves scoring a set of pre-selected attributes, which, when combined, represent a roadside's conservation status. A list of these attributes is presented on a standard survey sheet (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 5 nominated weeds; and
- Presence of salt affected roadside.

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

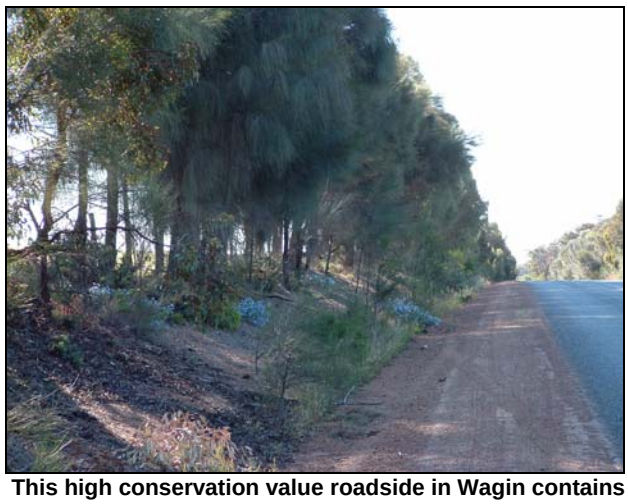
The RCC produced a computer-generated map (using a Geographic Information System, or GIS), at a scale of 1:100,000 for the Shire of Wagin. Known as the Roadside Conservation Value (RCV) map, it depicts the conservation status of the roadside vegetation and the width of the road reserves within the Shire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

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

1.3 Roadside Conservation Value Categories

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

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



This high conservation value roadside in Wagin contains relatively intact, undisturbed and diverse remnant vegetation, with a very minimal level of weeds.
Photo K. Jackson.

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

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

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

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

- natural structure disturbed, i.e. one or more vegetation layers absent;
- extent of native vegetation between 20-80%;
- medium to low diversity of native flora, i.e. between 0-5 species;
- half to mostly weeds, i.e. between 20-80% of total plants; 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 0-4, and generally have the following characteristics:

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

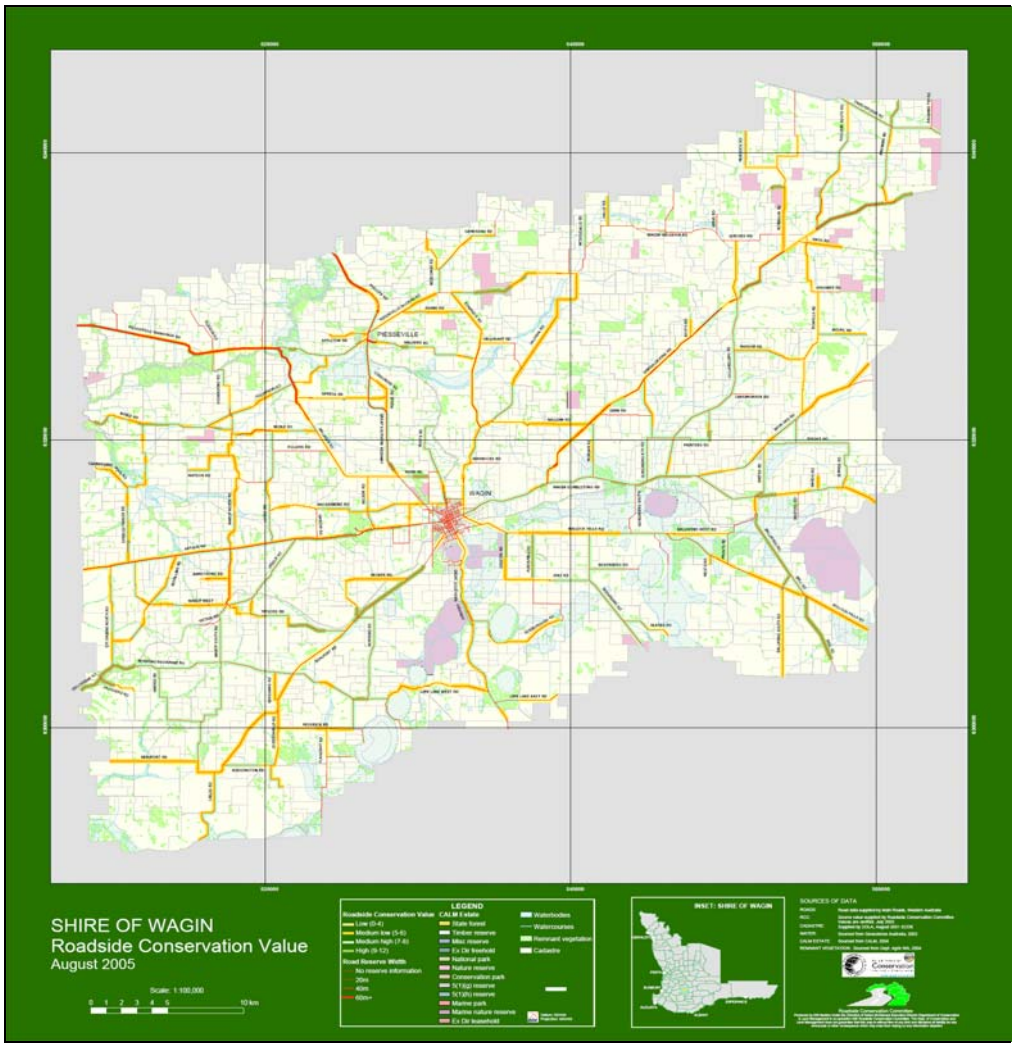
Low conservation value roadsides are typically dominated by weeds and have little or no native vegetation, as is evident on this roadside in Wagin.
Photo by K. Jackson.

2.0 USING THE RCV MAP

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

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

The map can also be used as a reference to overlay transparencies of other information relevant to roadside conservation. This enables the roadside vegetation to be assessed in the context of its importance to the Shire's overall conservation network. To further assist in roadside management the Shire could produce other overlays such as the degree of weed infestation, locations of Environmentally Sensitive Areas or future planned developments.



The RCV map depicts roadside conservation values in the Shire of Wagin.

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

- Regional or District fire management plans;
- Landcare and/or Bushcare projects that would be able to incorporate the information from this survey into 'whole of' landscape projects; 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 CALM

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 Wagin are presented in 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 Wagin 2004-05

Length of roadsides surveyed: 1,441.9 km (721 km of road)

Conservation Status

	Total (km)	%
High (9-12)	119.4	8.3
Medium-high (7-8)	586.7	40.7
Medium-low (5-6)	447.9	31.1
Low (0-4)	287.9	20.0
Total	1441.9	100.0

Number of Native Plant Species

	Total (km)	%
Over 20 species	58.3	4.0
6 to 19 species	808.7	56.1
0 to 5 species	575.0	39.9
Total	1441.9	100.0

Weed Infestation

	Total (km)	%
Light <20% weeds	156.1	10.8
Medium 20-80% weeds	151.2	10.5
Heavy >80% weeds	1134.6	78.7
Total	1441.9	100.0

Width of Vegetated Roadside

	Total (km)	%
1 to 5 m	1202.1	83.4
5 to 20 m	128.6	8.9
Over 20 m	22.5	1.6
Unknown	88.8	6.2
Total	1441.9	100.0

Native Vegetation in Roadsides

	Total (km)	%
2-3 vegetation layers	944.4	65.5
1 vegetation layer	454.7	31.5
0 vegetation layers	42.8	3.0
Total	1441.9	100.0

Extent of Native Vegetation

	Total (km)	%
Over 80%	119.5	8.3
20% to 80%	773.9	53.7
Less than 20%	548.6	38.0
Total	1441.9	100.0

Value as a Biological Corridor

	Total (km)	%
High	869.4	60.3
Medium	355.9	24.7
Low	216.7	15.0
Total	1441.9	100.0

Predominant Adjoining Land Use

	Total (km)	%
Agricultural: completely cleared	813.4	56.4
Agricultural: scattered vegetation	473.1	32.8
Uncleared native vegetation	125.1	8.7
Drain	0.0	0.0
Plantation of non-natives	5.2	0.4
Railway	19.7	1.4
Urban or Industrial	3.9	0.3
Other	1.5	0.1
Total	1441.9	100.0

Roadside surveys were carried out in Wagin Shire from October 2004 to July 2005

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

Width of Road Reserve

The width of road reserves in the Shire of Wagin was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 594.4km (82.4%) of roads falling into this category. Of the remaining roads 78.2km (10.8%) were 40 metres in width, 21.7km (3.0%) were 100 metres in width and 1.0km (0.1%) were 60 metres in width. 3.5% of roads (25.5 km) recorded an unknown width. No road reserves were recorded to be 80m in width.

Width of Road Reserve- Wagin		
	Total km	%
20m	594.44	82.45
40m	78.20	10.85
60m	1.00	0.14
80m	0.00	0.00
100m	21.68	3.01
Unknown	25.65	3.56
Total	720.97	100.00

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

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 shown in Table 5. The majority of roadside vegetation, 1,202.1km (83.4%), was between 1 to 5 metres in width, followed by 128.6km (8.9%) of roadsides where the vegetation fell between 5 to 20 metres in width. Roadside vegetation over 20 metres in width spanned 22.5km (or 1.6%) of the roadsides surveyed, whilst the width was unknown for 88.8km (6.2%) of the roadsides surveyed.

Width of Vegetated Roadside- Wagin		
	Total Km	%
1-5m	1202.11	83.37
5-20m	128.55	8.92
Over 20m	22.48	1.56
Unknown	88.80	6.16
Total	1441.94	100.00

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

Native Vegetation on Roadsides

The number of native vegetation layers present, either the tree, shrub or ground layers determined the 'native vegetation on roadside' value. Sections with two to three layers of native vegetation covered 65.5% (944.4km) of roadsides, 31.5% (454.7km) of roadsides had only one layer and 3.0% (42.8km) had no layers of native vegetation (Table 3 and Figure 1).

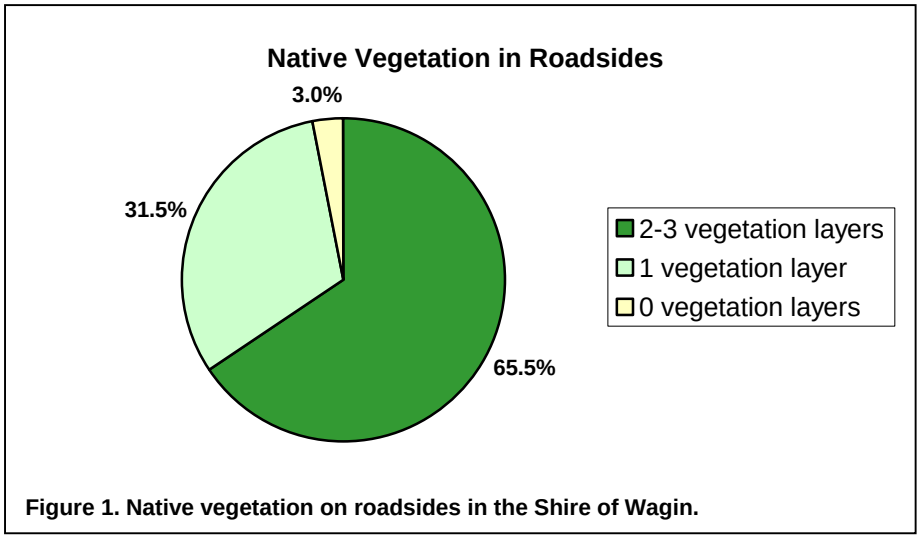


Figure 1. Native vegetation on roadsides in the Shire of Wagin.

Number of Native Plant Species

The ‘number of native plant species’ score provided a measure of the diversity of the roadside vegetation. Survey sections with more than 20 plant species spanned 4.0% (58.3km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 56.1% (808.7km) of the roadside. The remaining 39.9% (575.0km) contained less than 5 plant species (Table 3 and Figure 2).

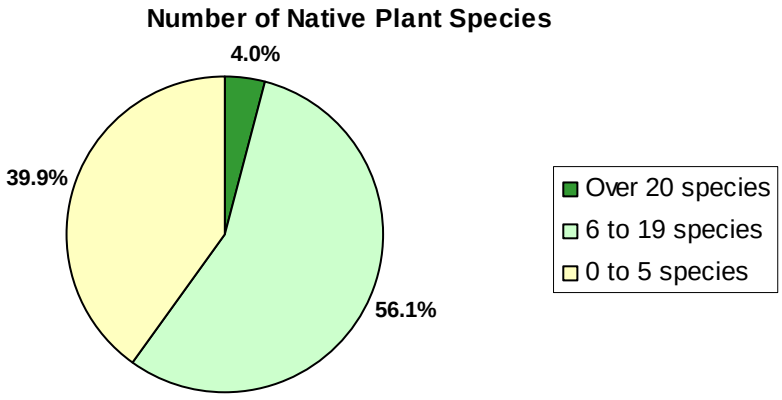


Figure 2. Number of native plant species in roadsides in Wagin.

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 8.3% (119.5km) of the roadsides surveyed. Survey sections with medium, i.e. 20% to 80%, vegetation cover accounted for 53.7% (773.9km) of the roadsides. The remaining 38.0% (548.6km) had less than 20% native vegetation and therefore, a low ‘extent of native vegetation’ value (Table 3 and Figure 3).

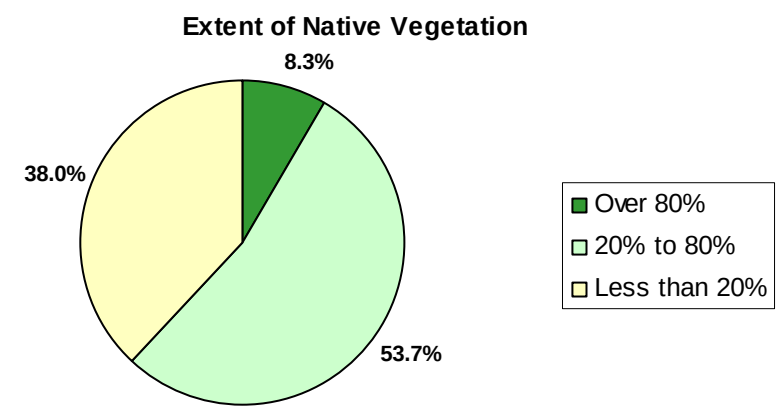


Figure 3. Extent of native vegetation in roadsides in the Shire of Wagin.

Value as a Biological Corridor

This characteristic considered the presence of four attributes: connection to uncleared areas; presence of flowering shrubs; large trees with hollows; and hollow logs. Roadsides determined to have high value as a biological corridor were present along 60.3% (869.4km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 24.7% (355.9km), and roadsides with low value as a biological corridor occurred along 15.0% (216.7km) of the roadsides surveyed (Table 3 and Figure 4).

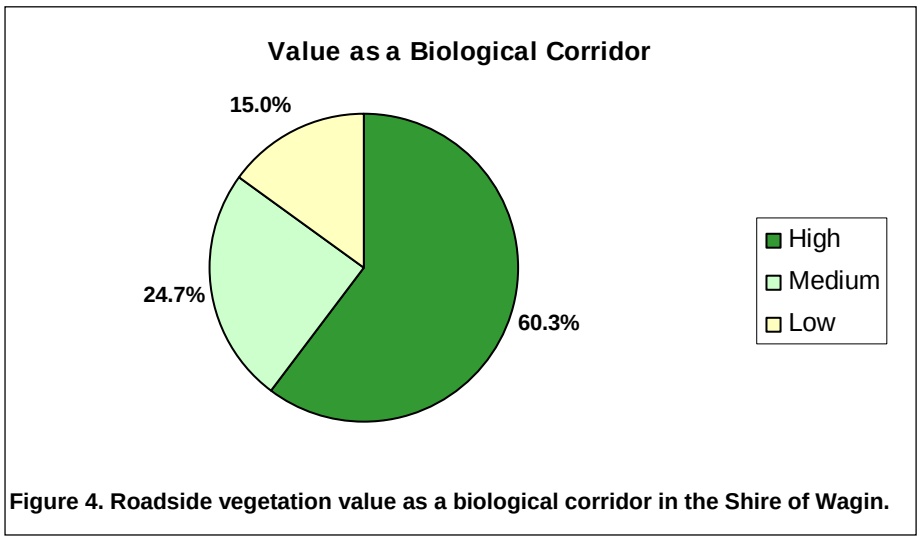


Figure 4. Roadside vegetation value as a biological corridor in the Shire of Wagin.

Weed Infestation

Light levels of weed infestation (weeds less than 20% of total plants), were recorded on 10.8% (156.1km) of the roadsides surveyed, medium level weed infestation (weeds 20-80% of the total plants) occurred on 10.5% (151.2km) of the roadsides and 78.7% (1,134.6km) of roadsides were heavily infested with weeds (weeds more than 80% of the total plants) (Table 3 and Figure 5).

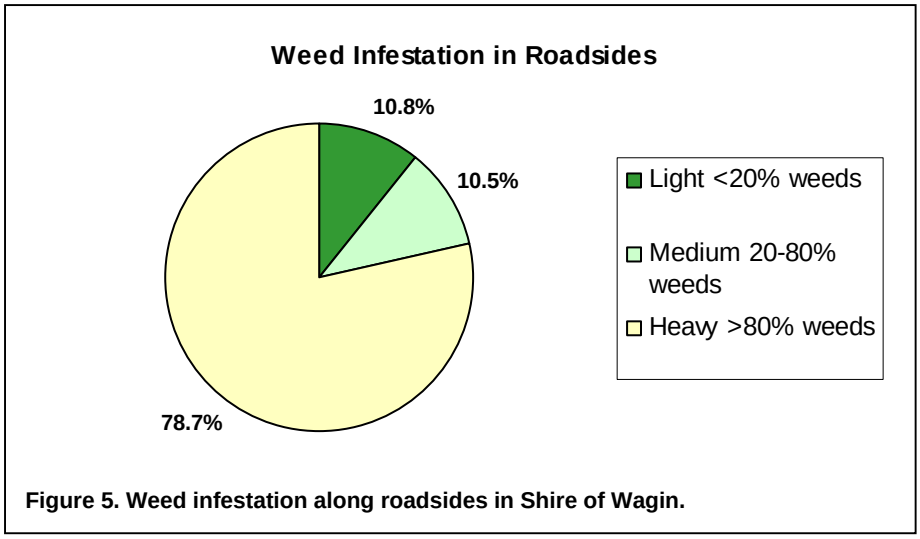


Figure 5. Weed infestation along roadsides in Shire of Wagin.

Predominant Adjoining Land Use

Uncleared native vegetation was present on 8.7% (125.1km) of the land adjoining roadsides, whilst 56.4% (813.4km) of roadsides adjoined land that had been completely cleared for agriculture. 32.8% (473.1km) of the roadsides bordered land cleared for agriculture, but contained a scattered distribution of native vegetation. Railway reserves were the predominant adjoining landuse for 1.4% (19.7km) of the roadsides surveyed, plantation of non-natives covered 0.4% (5.2km) of the roadsides surveyed, urban or industrial land uses bordered 0.3% (3.9km) and 'other' landuses adjoined 0.1% (1.5km) of the roadsides surveyed (Table 3 and Figure 6).

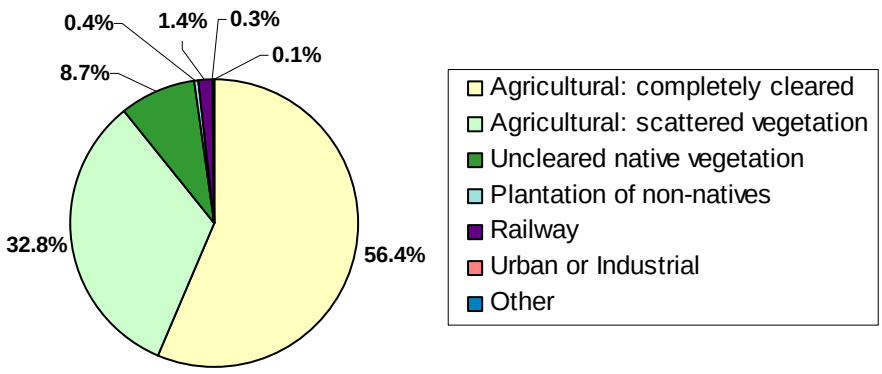


Figure 6. Predominant adjoining land use in the Shire of Wagin.

Nominated Weeds

The following weeds are depicted on clear overlays accompanying the 2005 Roadside Conservation Value map:

- Soursob (*Oxalis pes-caprae*);
- Bridal Creeper (*Asparagus asparagoides*);
- Cape Tulip (*Moraea flaccida* and *Moraea miniata*);
- Perennial Veldt Grass (*Ehrharta calycina*); and
- Wild Radish (*Raphanus raphanistrum*).

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

Of the nominated weeds species, as determined by the roadside vegetation surveys, Veldt Grass was the most prevalent, and was recorded along 328.8km (22.8%) of roads surveyed. Wild Radish was next most common, recorded along 83.5km (5.8%) of roads. Bridal Creeper was the next most commonly recorded weed, occurring along 28.8km (2.0%) of roads, followed by Cape Tulip, which was recorded along 22.2km (1.5%). The least commonly recorded weed was Soursob, which was recorded along 6.6km (0.5%) of road (Figure 7).

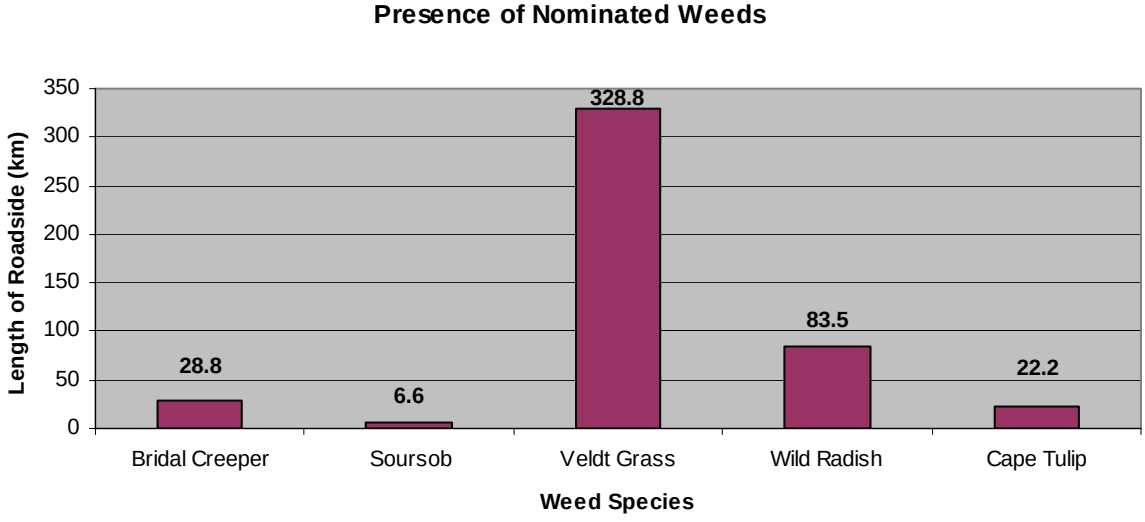


Figure 7. Presence of nominated weed groups along roads in the Shire of Wagin.

Salinity

The presence of salinity in roadsides was recorded throughout the survey and these locations are depicted on a separate clear overlay accompanying the 2005 RCV map. The surveyors determined the level of salt damage occurring in roadsides, and there were 3 categories to choose from:

- no or minor salt damage (<20% of roadside salt affected);
- moderate salt damage (20-80% of roadside salt affected); or
- major salt damage (>80% of roadside salt affected).

Salt affected roadside in the Shire of Wagin.
Photo by K. Jackson

Of the 1,441.9 km of roadsides surveyed, 82.6% (1190.5km) of roadsides had no, or minor (<20%) level of salt damage. Of the remaining roadsides, 14.7% (212.4km) were moderately affected by salt (20-80% salt affected) and 2.7% (39.0km) were heavily affected by salt (Figure 8).

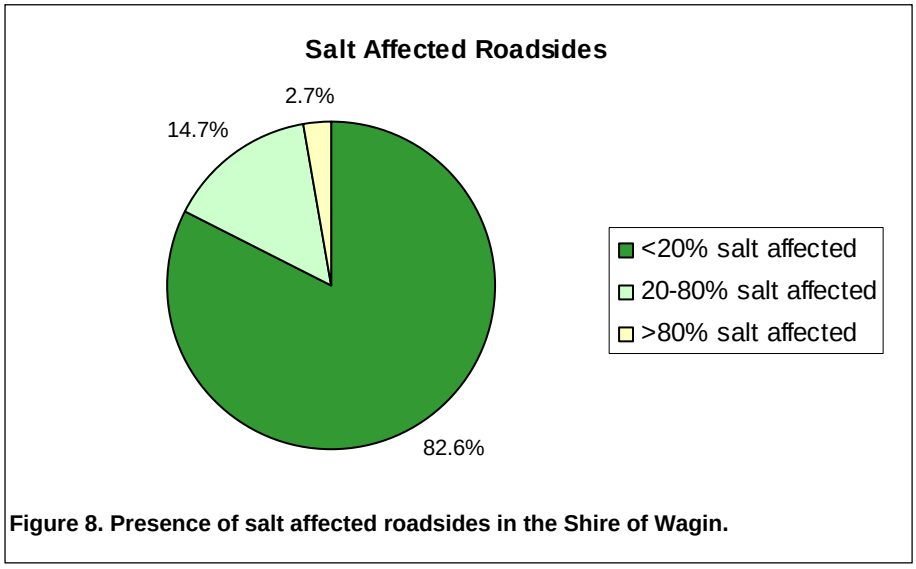


Figure 8. Presence of salt affected roadsides in the Shire of Wagin.

Conservation Status

The conservation status category indicated the combined conservation value of roadsides surveyed in the Shire of Wagin. Roadside sections of high conservation value covered 8.3% (119.4km) of the length of roadsides surveyed. Medium-high conservation value roadsides accounted for 40.7% of the total surveyed (586.7km), medium-low conservation roadside covered 31.1% (447.9km) of the total surveyed. Roadsides of low conservation value occupied 20.0% (287.9km) of the roadsides surveyed (Table 3 and Figure 9).

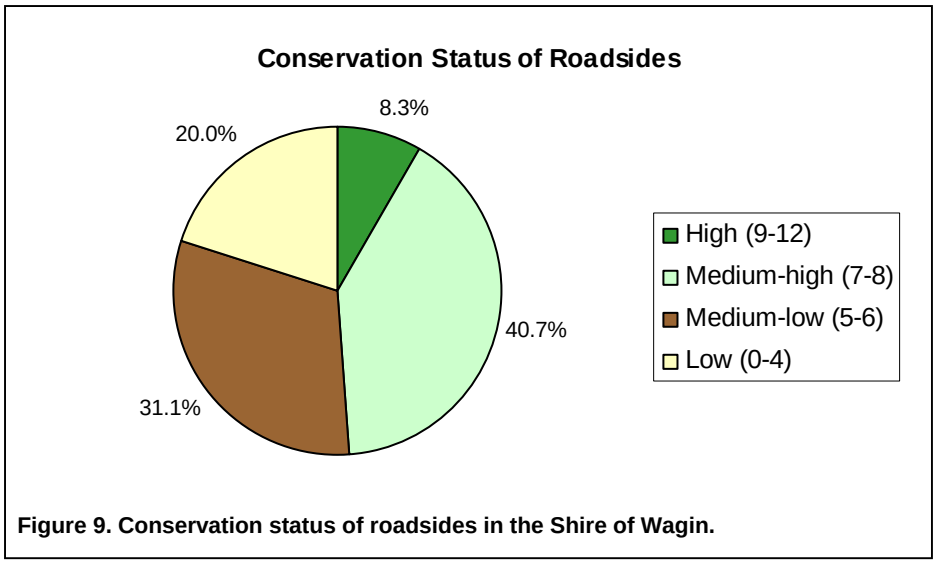


Figure 9. Conservation status of roadsides in the Shire of Wagin.

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, these are shown in Figure 10. The most occurring roadside conservation values ranged between 4 and 8, with a score of 7 being the highest with 330.9km of roadside, followed by 8 (255.8km), then 6 (230.2km) and then the score of 5 (217.7km). Roadsides with a conservation value score of 4 covered 176.3km of roadsides, a score of 3 covered 79.4km, and a score of 9 spanned 64.5km of roadside. 48.0km of roadsides scored 10, 24.8km of roadsides scored 2, 7.2km of roadside scored 1, 6.5km of roadsides scored 11, 0.5km of roadsides scored a conservation value of 12 and a conservation value of 0 was awarded to 0.3km of roadsides.

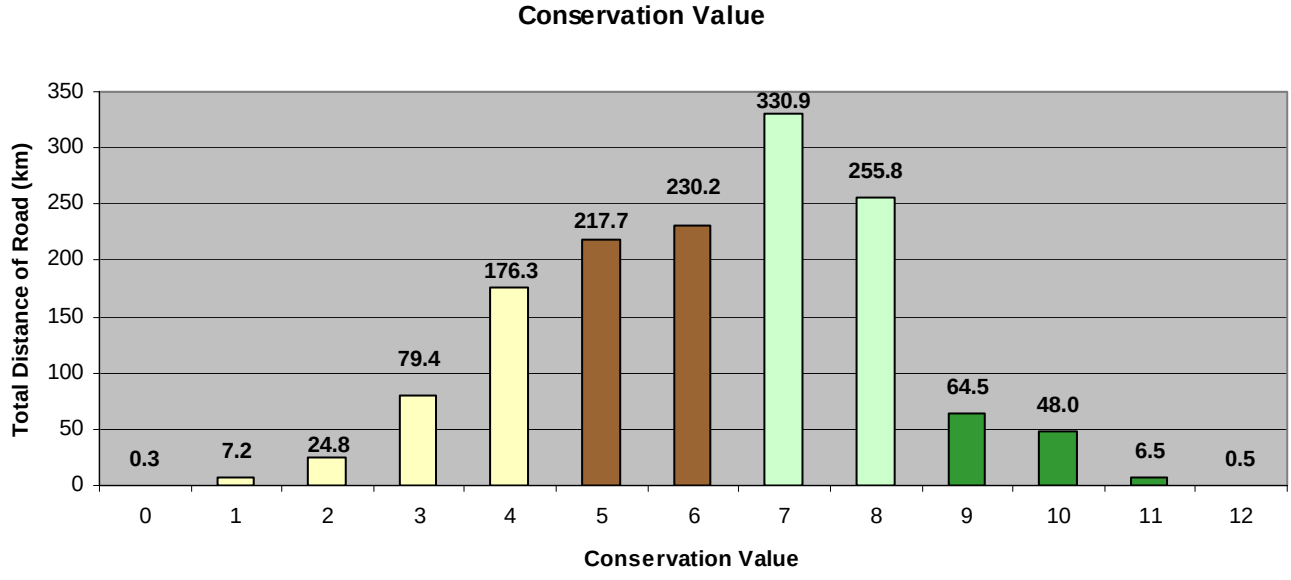


Figure 10. Conservation value scores of all roadsides surveyed in the Shire of Wagin.

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).

Flora Road nominations are assessed by the RCC.
Photo D Lamont.

There are currently no flora roads declared within the Shire of Wagin. However, the roadside survey and the Roadside Conservation Value (RCV) map highlighted a few 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 Wagin include:

- Dongolocking Road - the section heading northeast of Toolibin South Road to the Shire Boundary; and
- Beaufort Road – heading out of Wagin townsite for approximately 6 km.

PART D

ROADSIDE MANAGEMENT RECOMMENDATIONS

1.0 Management Recommendations

The primary aim of road management is the creation and maintenance of a safe, efficient road system. However, the following management procedures are recommended. This section provides general management recommendations that will assist in retaining and enhancing roadside conservation values.

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

- *The Roadside Handbook;*
- *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 it into tourist, wildflower and/or scenic drives.

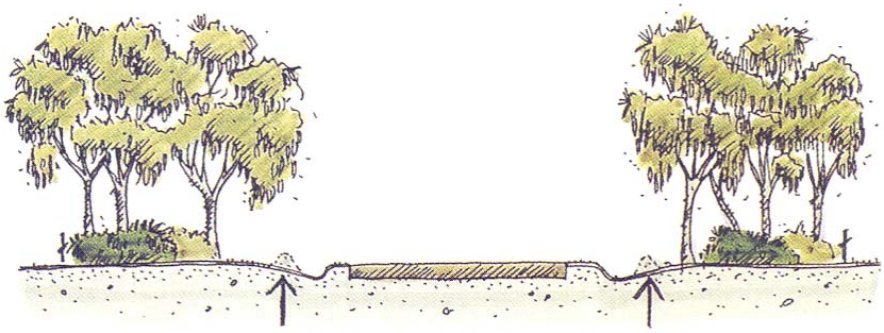
1.3 Improve roadside sections of medium to low conservation value by:

- 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
- encourage revegetation projects by adjacent landholders.

2.0 Minimising Disturbance

Minimal disturbance can be achieved by:

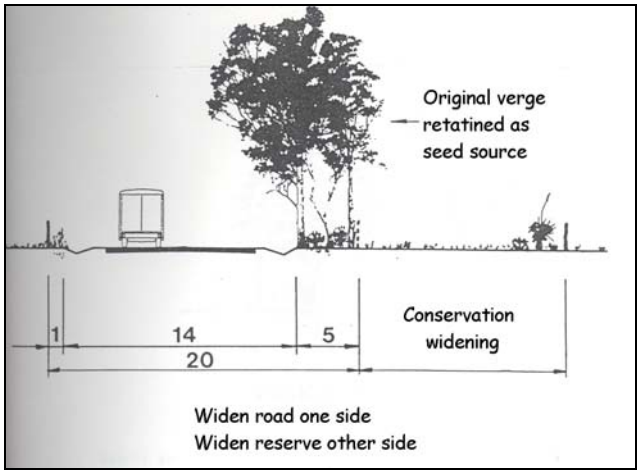
- adopting a road design that occupies the minimum space;
- diverting the line of a table drain to avoid disturbing valuable flora;
- pruning branches, rather than removing the whole tree or shrub;
- not dumping spoil on areas of native flora;
- applying the Fire Threat Assessment (see RCC Roadside Manual) before burning roadside vegetation, use methods other than fuel reduction burns to reduce fire threat; if roadside burning must be undertaken, incorporate it into a district fire management program;
- 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

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.

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.



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 Executive Officer on (08) 9334 0423.

4.0 Setting Objectives

The objective of all roadside management should be to:

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

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Appendix

1

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

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

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

Date ______________________

Observer(s) ______________________

Road Name ______________________

Shire ______________________

Nearest named place ______________________

Direction of travel (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

2

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150001	1	0.00	0.50	0.50	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	0	0	0	0	1	1	0	0	0	0	1	1	2	2	
3150001	2	0.50	1.40	0.90	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	1	0	1	0	2	0	2	1	0	2	8	5	
3150001	3	1.40	1.70	0.30	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	60	0	2	0	1	0	1	0	0	1	2	2	0	3	6	
3150001	4	1.70	2.60	0.90	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	0	0	0	0	0	0	0	0	1	1	2	2	3	3	
3150001	5	2.60	6.20	3.60	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	1	1	0	0	0	0	0	0	2	2	2	2	5	5	
3150001	6	6.20	7.30	1.10	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	1	1	0	0	0	0	0	0	2	2	2	2	5	5	
3150001	7	7.30	8.30	1.00	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate		1	2	0	1	1	1	0	1	2	2	2	0	6	7	
3150001	8	8.30	14.40	6.10	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	1	1	0	0	0	0	0	0	2	2	1	1	4	4	WILD_RADISH
3150001	9	14.40	16.80	2.40	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150001	10	16.80	17.70	0.90	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate		1	1	1	1	0	0	0	0	2	2	0	0	4	4	VELDT_GRASS
3150001	11	17.70	18.30	0.60	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	1	1	0	1	0	0	0	0	1	1	2	2	4	5	VELDT_GRASS
3150001	12	18.30	19.20	0.90	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate		2	2	1	2	1	1	1	1	2	2	1	1	8	9	
3150001	13	19.20	20.60	1.40	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	2	2	1	1	2	2	2	2	1	1	10	10	
3150001	14	20.60	23.30	2.70	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	1	2	0	1	0	1	0	0	2	2	2	2	5	8	VELDT_GRASS
3150001	15	23.30	25.90	2.60	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate		1	2	0	1	0	0	0	0	2	2	1	1	4	6	VELDT_GRASS
3150001	16	25.90	27.80	1.90	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	1	2	1	1	2	2	2	2	1	2	9	11	VELDT_GRASS
3150001	17	27.80	29.30	1.50	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	1	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150001	18	29.30	29.80	0.50	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	2	2	2	2	2	2	1	2	1	2	10	12	VELDT_GRASS
3150001	19	29.80	30.70	0.90	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	2	2	1	1	1	1	2	2	2	1	10	9	VELDT_GRASS
3150001	20	30.70	31.00	0.30	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	2	2	2	2	1	1	2	2	2	2	1	1	10	10	
3150001	21	31.00	32.20	1.20	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate	40	1	2	0	2	1	1	2	2	1	2	1	1	6	10	
3150001	22	32.20	35.10	2.90	DONGOLOCKING RD	North	21-Jul-05	Bec&Kate		2	2	2	2	1	1	2	2	2	2	1	0	10	9	
3150002	1	0.00	0.45	0.45	BEAUFORT RD	South	23-Oct-04	kershaw	20	1	1	0	0	1	1	0	0	1	1	0	0	3	3	
3150002	2	0.45	1.20	0.75	BEAUFORT RD	South	23-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	0	0	1	1	2	2	
3150002	3	2.60	8.70	6.10	BEAUFORT RD	South	23-Oct-04	kershaw	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS
3150002	4	8.70	10.60	1.90	BEAUFORT RD	South	23-Oct-04	kershaw	20	2	2	1	1	1	1	0	0	2	1	2	0	8	5	VELDT_GRASS
3150002	5	10.60	14.10	3.50	BEAUFORT RD	South	23-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	VELDT_GRASS
3150002	6	14.10	15.30	1.20	BEAUFORT RD	South	23-Oct-04	kershaw	20	2	1	1	1	1	0	0	0	2	2	0	2	6	6	VELDT_GRASS
3150002	7	15.30	30.90	15.60	BEAUFORT RD	South	23-Oct-04	kershaw	20	1	1	0	0	1	1	0	0	1	1	2	2	5	5	VELDT_GRASS
3150003	1	0.00	6.60	6.60	BALLAGIN RD	North	27-Oct-04	horace	20	1	1	0	0	1	1	0	0	1	1	1	1	4	4	WILD_RADISH VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150003	2	6.60	7.10	0.50	BALLAGIN RD	North	27-Oct-04	horace	20	2	2	1	1	1	1	2	0	2	2	0	1	8	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150003	3	7.10	7.70	0.60	BALLAGIN RD	North	27-Oct-04	horace	20	1	1	1	1	0	0	0	0	0	0	1	2	3	4	
3150003	4	7.70	8.30	0.60	BALLAGIN RD	North	27-Oct-04	horace	40	2	0	1	0	1	0	0	0	1	1	1	1	6	2	
3150003	5	8.30	8.80	0.50	BALLAGIN RD	North	27-Oct-04	horace	40	1	1	0	0	0	0	0	0	0	0	2	1	3	2	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150003	6	8.80	9.00	0.20	BALLAGIN RD	North	27-Oct-04	horace	40	2	2	1	1	0	0	0	0	0	0	2	1	5	4	
3150003	7	9.00	9.40	0.40	BALLAGIN RD	North	27-Oct-04	horace	40	1	2	0	1	0	1	0	0	0	1	1	1	2	6	
3150003	8	9.40	10.20	0.80	BALLAGIN RD	North	27-Oct-04	horace	100	2	2	1	1	1	1	0	0	1	1	1	1	6	6	
3150003	9	10.20	10.80	0.60	BALLAGIN RD	North	27-Oct-04	horace	100	2	2	1	1	1	1	0	0	2	2	1	0	7	6	VELDT_GRASS
3150003	10	10.80	11.50	0.70	BALLAGIN RD	North	27-Oct-04	horace	100	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150003	11	11.50	12.00	0.50	BALLAGIN RD	North	27-Oct-04	horace	100	2	2	1	2	1	1	0	0	2	2	1	1	7	8	
3150003	12	12.00	12.30	0.30	BALLAGIN RD	North	27-Oct-04	horace	100	2	2	0	1	0	1	0	0	0	1	1	1	3	6	
3150003	13	12.30	13.10	0.80	BALLAGIN RD	North	27-Oct-04	horace	100	2	2	1	2	2	2	0	0	2	2	1	0	8	8	SALT_AFFECTED_ROADSIDE
3150003	14	13.10	13.50	0.40	BALLAGIN RD	North	27-Oct-04	horace	100	2	2	2	2	1	1	2	2	2	2	0	0	9	9	
3150004	1	0.00	4.10	4.10	BULLOCK HILLS RD	South	28-Oct-04	mark	20	2	2	0	0	0	0	0	0	1	1	0	0	3	3	SALT_AFFECTED_ROADSIDE
3150004	2	4.10	9.80	5.70	BULLOCK HILLS RD	South	28-Oct-04	mark	20	2	2	0	0	0	0	0	0	2	2	2	2	6	6	CAPE_TULIP VELDT_GRASS
3150004	3	9.80	10.70	0.90	BULLOCK HILLS RD	South	28-Oct-04	mark	20	1	1	0	0	0	0	2	2	1	1	2	2	6	6	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150004	4	10.70	17.20	6.50	BULLOCK HILLS RD	South	28-Oct-04	mark	20	2	2	0	0	0	0	1	1	2	2	0	2	7	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150004	5	17.20	19.10	1.90	BULLOCK HILLS RD	South	28-Oct-04	mark	20	2	2	1	0	0	0	0	0	2	0	0	2	5	4	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150004	6	19.10	20.00	0.90	BULLOCK HILLS RD	South	28-Oct-04	mark	20	2	2	0	1	0	1	0	2	0	2	2	0	4	8	VELDT_GRASS
3150004	7	20.00	28.90	8.90	BULLOCK HILLS RD	South	28-Oct-04	mark	20	2	2	0	0	0	0	0	0	1	1	2	2	5	5	
3150005	1	0.00	0.60	0.60	JALORAN RD	North	27-Oct-04	mark	20	2	2	0	1	0	0	0	0	0	0	0	1	2	4	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150005	2	0.60	1.20	0.60	JALORAN RD	North	27-Oct-04	mark	20	1	2	1	0	1	0	2	0	0	0	0	2	5	4	VELDT_GRASS
3150005	3	1.20	2.00	0.80	JALORAN RD	North	27-Oct-04	mark	20	2	2	1	1	1	1	0	0	2	2	0	2	6	8	VELDT_GRASS
3150005	4	2.00	2.40	0.40	JALORAN RD	North	27-Oct-04	mark	20	1	1	0	0	0	0	0	0	0	0	0	0	1	1	VELDT_GRASS
3150005	5	2.40	2.70	0.30	JALORAN RD	North	27-Oct-04	mark	20	2	2	1	1	0	0	0	0	1	0	2	2	6	5	
3150005	6	2.70	3.10	0.40	JALORAN RD	North	27-Oct-04	mark	20	1	1	0	0	0	0	0	0	1	1	2	0	4	2	
3150005	7	3.10	4.00	0.90	JALORAN RD	North	27-Oct-04	mark	20	1	0	0	1	0	1	0	0	1	1	2	2	4	5	VELDT_GRASS
3150005	8	4.00	6.70	2.70	JALORAN RD	North	27-Oct-04	mark	20	2	2	0	0	0	1	2	2	0	0	2	2	6	7	VELDT_GRASS
3150005	9	6.70	7.30	0.60	JALORAN RD	North	27-Oct-04	mark	20	2	2	1	0	0	0	0	0	0	2	2	2	5	6	VELDT_GRASS
3150005	10	7.30	10.40	3.10	JALORAN RD	North	27-Oct-04	mark	20	2	2	1	1	1	1	1	1	1	0	2	2	8	7	
3150005	11	10.40	14.40	4.00	JALORAN RD	North	27-Oct-04	mark	20	2	2	0	0	1	1	0	0	0	0	2	2	5	5	VELDT_GRASS
3150005	12	14.40	19.54	5.14	JALORAN RD	North	27-Oct-04	mark	20	2	2	0	0	1	1	0	0	0	0	2	2	5	5	VELDT_GRASS
3150006	1	0.00	1.80	1.80	BEHN ORD RD	East	28-Oct-04	nathan	20	2	2	0	0	1	1	0	0	1	2	2	2	6	7	SALT_AFFECTED_ROADSIDE
3150006	2	1.80	2.50	0.70	BEHN ORD RD	East	28-Oct-04	nathan	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	
3150006	3	2.50	3.30	0.80	BEHN ORD RD	East	28-Oct-04	nathan	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	
3150006	4	3.30	3.70	0.40	BEHN ORD RD	East	28-Oct-04	nathan	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	
3150006	5	3.70	4.90	1.20	BEHN ORD RD	East	28-Oct-04	nathan	20	2	2	1	2	1	2	0	0	1	2	1	0	6	8	SALT_AFFECTED_ROADSIDE
3150006	6	4.90	5.30	0.40	BEHN ORD RD	East	28-Oct-04	nathan	20	0	1	0	0	0	0	0	0	0	0	1	0	1	1	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150006	7	5.30	6.10	0.80	BEHN ORD RD	East	28-Oct-04	nathan	20	2	1	0	0	0	0	0	0	2	2	2	2	6	5	
3150006	8	6.10	6.40	0.30	BEHN ORD RD	East	28-Oct-04	nathan	20	2	2	1	1	2	1	0	0	2	2	0	1	7	7	
3150006	9	6.40	8.30	1.90	BEHN ORD RD	East	28-Oct-04	nathan	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	
3150006	10	8.30	14.22	5.92	BEHN ORD RD	East	21-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	VELDT_GRASS WILD_RADISH
3150007	1	0.00	2.40	2.40	BOCKARING RD	South	28-Oct-04	mark	20	2	2	0	0	0	0	1	1	2	2	2	2	7	7	VELDT_GRASS
3150007	2	2.40	8.10	5.70	BOCKARING RD	South	28-Oct-04	mark	20	2	2	0	0	0	0	1	1	2	2	2	2	7	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150007	3	8.10	8.90	0.80	BOCKARING RD	South	28-Oct-04	mark	20	2	2	1	1	0	1	1	2	2	2	2	0	8	8	VELDT_GRASS
3150008	1	0.00	1.30	1.30	COLLANILLING RD	North	28-Oct-04	HORACE WILLIAMS	20	2	1	1	0	1	1	0	0	1	1	2	2	7	5	
3150008	2	1.30	5.80	4.50	COLLANILLING RD	North	28-Oct-04	HORACE WILLIAMS	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	VELDT_GRASS
3150008	3	5.80	8.60	2.80	COLLANILLING RD	North	28-Oct-04	HORACE WILLIAMS	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150008	4	8.60	14.10	5.50	COLLANILLING RD	North	28-Oct-04	HORACE WILLIAMS	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	VELDT_GRASS
3150008	5	14.10	18.30	4.20	COLLANILLING RD	North	27-Oct-04	mark	20	2	2	0	1	0	0	0	0	0	0	2	2	4	5	VELDT_GRASS
3150009	1	0.00	6.80	6.80	NORRING RD	South	21-Jul-05	kershaw	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	BRIDAL_CREEPER
3150009	2	6.80	7.70	0.90	NORRING RD	South	21-Jul-05	kershaw	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	
3150009	3	7.70	9.75	2.05	NORRING RD	South	21-Jul-05	kershaw	20	2	1	1	1	0	0	1	1	2	2	2	2	8	7	
3150010	1	0.00	1.70	1.70	NORRING-DELYANINE RD	East	24-Oct-04	kershaw	20	2	2	2	2	2	2	2	2	2	2	1	0	11	10	
3150010	2	1.70	2.70	1.00	NORRING-DELYANINE RD	East	24-Oct-04	kershaw	20	2	2	2	2	2	2	2	2	2	2	1	1	11	11	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150010	3	2.70	15.10	12.40	NORRING-DELYANINE RD	East	24-Oct-04	kershaw	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150010	4	15.10	16.10	1.00	NORRING-DELYANINE RD	East	24-Oct-04	kershaw	20	1	1	1	1	0	0	0	0	2	2	1	1	5	5	SALT_AFFECTED_ROADSIDE
3150010	5	16.10	17.70	1.60	NORRING-DELYANINE RD	East	24-Oct-04	kershaw	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	SALT_AFFECTED_ROADSIDE
3150011	1	0.00	0.70	0.70	NOBLE RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	2	1	0	6	6	
3150011	2	0.70	1.00	0.30	NOBLE RD	West	28-Oct-04	bert	20	2	2	1	1	1	1	2	0	2	0	0	1	8	5	
3150011	3	1.00	2.10	1.10	NOBLE RD	West	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	
3150011	4	2.10	3.35	1.25	NOBLE RD	West	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	0	1	2	6	6	
3150011	5	3.35	3.55	0.20	NOBLE RD	West	28-Oct-04	bert	40	2	2	1	1	0	0	0	0	0	0	2	2	5	5	
3150011	6	3.55	3.90	0.35	NOBLE RD	West	28-Oct-04	bert	40	1	1	1	0	0	0	0	0	0	0	2	2	4	3	
3150011	7	3.90	4.30	0.40	NOBLE RD	West	28-Oct-04	bert	40	2	1	1	0	1	1	0	0	0	1	1	2	5	5	
3150011	8	4.30	5.10	0.80	NOBLE RD	West	28-Oct-04	bert	40	2	2	1	1	1	1	0	0	1	1	1	1	6	6	
3150011	9	5.10	5.65	0.55	NOBLE RD	West	28-Oct-04	bert	40	2	2	1	1	1	1	0	0	2	1	1	1	7	6	
3150011	10	5.65	6.10	0.45	NOBLE RD	West	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	1	1	1	6	6	
3150011	11	6.10	6.65	0.55	NOBLE RD	West	28-Oct-04	bert	20	1	2	1	1	1	1	0	0	2	1	1	2	6	7	
3150011	12	6.65	7.20	0.55	NOBLE RD	West	28-Oct-04	bert	20	2	2	2	1	2	2	0	2	2	1	0	2	8	10	
3150011	13	7.20	7.40	0.20	NOBLE RD	West	27-Oct-04	bert	20	2	1	1	0	2	1	0	0	2	1	0	2	7	5	
3150011	14	7.40	8.10	0.70	NOBLE RD	West	27-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	2	2	1	7	7	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150011	15	8.10	8.70	0.60	NOBLE RD	West	27-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	2	2	1	7	7	
3150011	16	8.70	9.40	0.70	NOBLE RD	West	27-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	1	2	1	7	6	SALT_AFFECTED_ROADSIDE
3150011	17	9.40	10.20	0.80	NOBLE RD	West	27-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	VELDT_GRASS
3150011	18	10.20	11.40	1.20	NOBLE RD	West	27-Oct-04	bert	20	2	2	1	1	1	1	2	0	2	2	2	2	10	8	VELDT_GRASS
3150011	19	11.40	12.30	0.90	NOBLE RD	West	27-Oct-04	bert	20	2	2	1	1	1	1	2	0	2	0	1	2	9	6	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150011	20	12.30	13.00	0.70	NOBLE RD	West	27-Oct-04	bert	20	1	1	1	1	0	0	0	0	2	1	1	2	5	5	VELDT_GRASS
3150011	21	13.00	13.30	0.30	NOBLE RD	West	27-Oct-04	bert	20	2	1	1	0	1	0	0	0	2	1	1	2	7	4	VELDT_GRASS
3150011	22	13.30	13.90	0.60	NOBLE RD	West	27-Oct-04	bert	20	1	1	2	1	0	0	0	0	1	0	2	2	5	4	VELDT_GRASS
3150011	23	13.90	14.40	0.50	NOBLE RD	West	27-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	0	2	2	7	6	VELDT_GRASS
3150011	24	14.40	15.10	0.70	NOBLE RD	West	27-Oct-04	bert	20	2	2	2	2	1	1	2	0	2	1	1	2	10	8	VELDT_GRASS
3150011	25	15.10	15.50	0.40	NOBLE RD	West	27-Oct-04	bert	20	2	2	2	2	1	1	2	2	2	2	0	1	9	10	VELDT_GRASS
3150012	1	0.00	0.40	0.40	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	2	1	1	0	0	2	0	1	1	0	0	6	4	SALT_AFFECTED_ROADSIDE
3150012	2	0.40	0.90	0.50	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	2	0	1	0	1	0	2	1	2	1	1	4	9	VELDT_GRASS
3150012	3	0.90	1.40	0.50	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150012	4	1.40	1.60	0.20	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	1	1	0	1	0	0	0	2	0	2	2	8	3	VELDT_GRASS
3150012	5	1.60	4.20	2.60	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	VELDT_GRASS
3150012	6	4.20	5.10	0.90	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150012	7	5.10	5.60	0.50	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	
3150012	8	5.60	6.30	0.70	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	20	2	2	2	2	2	2	0	0	2	2	0	0	8	8	
3150012	9	6.30	6.70	0.40	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	1	2	1	2	2	0	2	2	0	0	8	8	SALT_AFFECTED_ROADSIDE
3150012	10	6.70	7.60	0.90	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	1	1	0	0	2	1	1	0	2	2	8	6	
3150012	11	7.60	9.20	1.60	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	1	1	0	1	0	0	0	1	0	1	2	6	3	
3150012	12	9.20	9.60	0.40	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	1	1	0	0	0	0	2	2	1	1	1	1	5	5	
3150012	13	9.60	10.20	0.60	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	1	1	0	0	0	0	0	2	1	1	1	6	3	
3150012	14	10.20	11.00	0.80	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	1	1	0	0	0	0	2	2	1	1	2	1	6	5	SALT_AFFECTED_ROADSIDE
3150012	15	11.00	11.30	0.30	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	0	0	0	0	2	0	1	0	0	1	5	3	
3150012	16	11.30	12.40	1.10	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	2	1	1	1	2	0	2	1	0	1	9	6	CAPE_TULIP
3150012	17	12.40	12.80	0.40	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	1	1	0	0	0	0	0	0	0	1	2	1	3	3	CAPE_TULIP
3150012	18	12.80	13.00	0.20	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	0	1	0	0	0	0	0	1	2	1	4	5	
3150012	19	13.00	15.60	2.60	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	1	1	1	1	0	0	2	1	2	1	8	6	
3150012	20	15.60	16.30	0.70	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	1	1	1	0	1	0	0	0	1	1	1	1	5	3	SALT_AFFECTED_ROADSIDE
3150012	21	16.30	17.60	1.30	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150012	22	17.60	18.60	1.00	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	1	1	1	1	0	0	1	2	2	1	7	7	BRIDAL_CREEPER
3150012	23	18.60	18.90	0.30	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	2	1	2	1	0	0	2	2	0	1	8	7	BRIDAL_CREEPER

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150012	24	18.90	19.30	0.40	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3150012	25	19.30	20.10	0.80	PIESSEVILLE-TARWONGA RD	West	27-Oct-04	HORACE	100	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150013	1	0.00	1.40	1.40	LIME LAKE WEST	East	24-Oct-04	kershaw	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	SALT_AFFECTED_ROADSIDE
3150013	2	1.40	2.40	1.00	LIME LAKE WEST	East	24-Oct-04	kershaw	20	1	1	1	1	0	0	0	0	2	2	2	0	6	4	
3150013	3	2.40	3.00	0.60	LIME LAKE WEST	East	24-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	SALT_AFFECTED_ROADSIDE
3150013	4	3.00	4.00	1.00	LIME LAKE WEST	East	24-Oct-04	kershaw	20	1	1	1	1	1	1	0	0	2	2	1	0	6	5	SALT_AFFECTED_ROADSIDE
3150013	5	4.00	4.30	0.30	LIME LAKE WEST	East	24-Oct-04	kershaw	20	1	0	1	0	0	0	0	0	2	0	0	0	4	0	
3150013	6	4.30	6.10	1.80	LIME LAKE WEST	East	24-Oct-04	kershaw	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	VELDT_GRASS
3150013	7	6.10	8.30	2.20	LIME LAKE WEST	East	24-Oct-04	kershaw	20	1	1	1	1	0	0	0	0	2	2	2	2	6	6	VELDT_GRASS
3150013	8	8.30	8.70	0.40	LIME LAKE WEST	East	24-Oct-04	kershaw	20	1	1	1	1	0	0	0	0	2	2	0	0	4	4	VELDT_GRASS
3150014	1	0.00	12.40	12.40	WARUP SOUTH RD	North	23-Oct-04	kershaw	20	2	1	1	1	1	1	0	0	2	2	2	2	8	7	VELDT_GRASS
3150014	2	12.40	12.90	0.50	WARUP SOUTH RD	North	20-Jul-05	Bec&Kate	40	2	1	0	0	0	0	0	0	1	1	1	1	4	3	VELDT_GRASS WILD_RADISH
3150014	3	12.90	14.70	1.80	WARUP SOUTH RD	North	20-Jul-05	Bec&Kate	40	2	2	1	1	0	0	0	0	2	2	1	1	6	6	
3150014	4	14.70	16.22	1.52	WARUP SOUTH RD	North	20-Jul-05	Bec&Kate	40	1	1	1	1	1	1	0	0	2	1	2	2	7	6	WILD_RADISH
3150015	1	0.00	0.40	0.40	WARUP NORTH RD	South	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	0	0	2	1	3	2	
3150015	2	0.40	0.80	0.40	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	
3150015	3	0.80	1.40	0.60	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	1	1	1	0	2	2	2	1	0	0	8	6	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150015	4	1.40	1.80	0.40	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	0	1	0	1	0	0	0	1	1	1	3	6	
3150015	5	1.80	2.90	1.10	WARUP NORTH RD	South	28-Oct-04	bert	20	1	1	1	1	1	1	0	0	1	2	1	1	5	6	
3150015	6	2.90	3.20	0.30	WARUP NORTH RD	South	28-Oct-04	bert	20	1	2	1	1	1	1	0	0	2	2	1	1	6	7	SALT_AFFECTED_ROADSIDE
3150015	7	3.20	4.10	0.90	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	1	1	0	0	0	0	1	1	2	2	6	6	
3150015	8	4.10	5.50	1.40	WARUP NORTH RD	South	28-Oct-04	bert	20	1	2	0	0	0	0	0	0	0	2	1	2	2	6	
3150015	9	5.50	7.00	1.50	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	0	0	1	1	0	0	2	2	1	1	6	6	
3150015	10	7.00	7.40	0.40	WARUP NORTH RD	South	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	2	2	1	1	4	4	
3150015	11	7.40	8.30	0.90	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	0	1	0	1	2	0	0	2	2	1	6	7	SALT_AFFECTED_ROADSIDE
3150015	12	8.30	8.60	0.30	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	1	2	1	1	0	0	0	1	2	1	6	7	
3150015	13	8.60	9.30	0.70	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	2	1	1	1	0	0	0	1	1	1	6	6	
3150015	14	9.30	10.16	0.86	WARUP NORTH RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	0	2	2	2	6	8	
3150016	1	0.00	3.10	3.10	WARUP WEST	West	29-Oct-04	dana	20	1	1	1	1	1	1	0	0	2	2	1	1	6	6	VELDT_GRASS CAPE_TULIP
3150016	2	3.10	3.80	0.70	WARUP WEST	West	29-Oct-04	dana	20	2	2	2	2	1	1	0	0	2	2	1	1	8	8	VELDT_GRASS CAPE_TULIP
3150016	3	3.80	4.90	1.10	WARUP WEST	West	29-Oct-04	dana	20	1	1	1	1	1	1	0	0	2	2	1	0	6	5	VELDT_GRASS
3150016	4	4.90	6.10	1.20	WARUP WEST	West	29-Oct-04	dana	20	2	1	1	1	1	1	0	0	1	2	1	1	6	6	VELDT_GRASS
3150016	5	6.10	8.80	2.70	WARUP WEST	West	29-Oct-04	dana	20	1	1	1	1	1	1	0	0	2	0	2	1	7	4	VELDT_GRASS
3150017	1	0.00	1.00	1.00	BALLAYING RD	South	21-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	WILD_RADISH

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150017	2	1.00	1.15	0.15	BALLAYING RD	South	21-Jul-05	Bec&Kate	20	0	0	0	0	0	0	0	0	1	2	2	2	3	4	VELDT_GRASS WILD_RADISH
3150018	1	0.00	6.20	6.20	BALLAYING SOUTH RD	South	28-Oct-04	mark	20	2	2	1	1	0	0	2	2	1	2	2	2	8	9	SALT_AFFECTED_ROADSIDE
3150018	2	6.20	12.05	5.85	BALLAYING SOUTH RD	South	28-Oct-04	mark	20	1	2	0	0	0	0	0	1	1	1	2	2	4	6	
3150019	1	0.00	0.90	0.90	HEIGHT RD	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	WILD_RADISH
3150019	2	0.90	1.80	0.90	HEIGHT RD	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	WILD_RADISH
3150019	3	1.80	5.40	3.60	HEIGHT RD	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	SALT_AFFECTED_ROADSIDE
3150020	1	0.00	0.80	0.80	LUCAS RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	
3150020	2	0.80	2.70	1.90	LUCAS RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	1	1	2	7	7	
3150020	3	2.70	3.20	0.50	LUCAS RD	North	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	2	1	1	2	4	4	
3150020	4	3.20	4.20	1.00	LUCAS RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	1	1	1	7	6	
3150020	5	4.20	4.60	0.40	LUCAS RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	0	1	1	7	5	
3150020	6	4.60	8.03	3.43	LUCAS RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	VELDT_GRASS
3150021	1	0.00	2.67	2.67	ROWELLS RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	
3150021	2	2.67	3.27	0.60	ROWELLS RD	North	27-Oct-04	nathan	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	
3150021	3	3.27	3.77	0.50	ROWELLS RD	North	27-Oct-04	nathan	20	1	2	0	0	0	0	0	0	0	0	2	2	3	4	
3150021	4	3.77	7.97	4.20	ROWELLS RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	
3150021	5	7.97	8.87	0.90	ROWELLS RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150021	6	8.87	9.57	0.70	ROWELLS RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	
3150021	7	9.57	9.77	0.20	ROWELLS RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	
3150021	8	9.77	12.27	2.50	ROWELLS RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	2	0	2	2	6	4	
3150021	9	12.27	12.87	0.60	ROWELLS RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	
3150022	1	0.00	2.10	2.10	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	SALT_AFFECTED_ROADSIDE
3150022	2	2.10	2.60	0.50	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	1	1	0	0	0	0	0	0	1	0	2	2	4	3	SALT_AFFECTED_ROADSIDE
3150022	3	2.60	3.40	0.80	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	2	2	1	1	0	0	0	0	1	1	2	2	6	6	
3150022	4	3.40	3.80	0.40	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	2	1	2	0	1	0	2	1	2	1	0	2	9	5	
3150022	5	3.80	4.60	0.80	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	1	1	1	0	0	0	0	0	2	2	2	2	6	5	
3150022	6	4.60	6.80	2.20	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3150022	7	6.80	7.20	0.40	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	2	2	2	2	1	1	2	2	2	2	1	0	10	9	
3150022	8	7.20	8.00	0.80	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	2	2	1	1	1	1	0	0	2	1	2	2	8	7	
3150022	9	8.00	8.70	0.70	PIESSEVILLE-JALORAN RD	South	26-Oct-04	rowena	20	2	2	1	1	1	0	0	0	2	1	1	1	7	5	
3150022	10	9.70	10.20	0.50	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	2	2	1	1	1	1	0	0	0	1	1	1	5	6	
3150022	11	10.20	11.10	0.90	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	2	2	1	1	1	1	0	0	1	1	0	0	5	5	
3150022	12	11.10	11.50	0.40	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	1	1	1	1	1	1	0	0	2	2	2	0	6	6	
3150022	13	11.50	12.20	0.70	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	1	1	1	0	0	0	0	0	2	1	2	2	6	4	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150022	14	12.20	12.50	0.30	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	1	1	0	0	0	0	0	0	0	1	2	1	3	3	
3150022	15	12.50	12.90	0.40	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	1	1	1	0	0	0	0	0	0	0	2	2	4	3	
3150022	16	12.90	13.40	0.50	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	1	1	0	0	0	0	0	0	0	1	2	2	3	4	
3150022	17	13.40	14.10	0.70	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	1	1	1	1	0	0	0	0	0	0	1	2	3	4	
3150022	18	14.10	14.90	0.80	PIESSEVILLE-JALORAN RD	West	26-Oct-04	rowena	20	1	1	1	1	1	1	2	0	2	0	1	0	8	3	
3150024	1	0.00	1.60	1.60	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	20	1	1	0	0	0	0	0	0	0	0	2	2	3	3	VELDT_GRASS
3150024	2	1.60	2.00	0.40	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	20	1	1	0	0	0	0	0	0	0	0	2	0	3	1	
3150024	3	2.00	4.20	2.20	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	
3150024	4	4.20	6.00	1.80	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	1	2	1	1	6	7	
3150024	5	6.00	6.40	0.40	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	20	1	1	1	1	1	1	2	2	1	1	2	2	8	8	BRIDAL_CREEPER
3150024	6	6.40	7.10	0.70	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	20	2	2	1	2	0	2	0	1	0	2	1	0	4	9	BRIDAL_CREEPER
3150024	7	7.10	8.50	1.40	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	40	2	2	1	1	1	1	0	0	1	2	1	1	6	7	VELDT_GRASS
3150024	8	8.50	8.60	0.10	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	40	2	2	0	0	0	0	0	0	1	1	1	1	4	4	VELDT_GRASS
3150024	9	8.60	9.30	0.70	TOOLIBIN SOUTH RD	South	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	1	2	1	1	6	7	VELDT_GRASS
3150025	1	0.00	0.60	0.60	TAYLORS RD	West	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	2	2	2	7	7	VELDT_GRASS
3150025	2	0.60	1.30	0.70	TAYLORS RD	West	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150025	3	1.30	3.80	2.50	TAYLORS RD	West	29-Oct-04	dana	20	2	1	2	2	1	1	1	1	2	2	1	2	9	9	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150025	4	3.80	4.40	0.60	TAYLORS RD	West	29-Oct-04	dana	20	1	1	0	1	0	0	0	0	2	2	2	2	5	6	VELDT_GRASS
3150025	5	4.40	6.20	1.80	TAYLORS RD	West	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	1	1	2	7	7	VELDT_GRASS
3150025	6	6.20	7.10	0.90	TAYLORS RD	West	29-Oct-04	dana	20	1	1	0	1	1	1	0	0	1	2	2	2	5	7	
3150025	7	7.10	7.60	0.50	TAYLORS RD	West	29-Oct-04	dana	20	1	1	1	1	0	0	0	0	0	0	2	2	4	4	
3150025	8	7.60	8.50	0.90	TAYLORS RD	West	29-Oct-04	dana	20	1	1	0	0	0	0	2	2	1	2	2	1	6	6	
3150025	9	8.50	8.90	0.40	TAYLORS RD	West	29-Oct-04	dana	20	1	2	0	2	0	1	0	0	1	2	1	0	3	7	SALT_AFFECTED_ROADSIDE
3150026	1	0.00	0.70	0.70	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	VELDT_GRASS
3150026	2	0.70	1.20	0.50	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	1	1	1	1	1	1	0	0	2	2	1	1	6	6	VELDT_GRASS
3150026	3	1.20	1.90	0.70	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	1	1	1	1	0	1	0	0	1	0	1	1	4	4	VELDT_GRASS
3150026	4	1.90	2.40	0.50	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150026	5	2.40	2.90	0.50	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	1	1	1	1	0	1	0	0	1	1	2	1	5	5	VELDT_GRASS
3150026	6	2.90	3.50	0.60	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	2	2	2	7	8	VELDT_GRASS
3150026	7	3.50	4.00	0.50	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	0	0	0	0	2	2	1	2	2	0	7	6	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150026	8	4.00	4.40	0.40	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	0	0	6	6	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150026	9	4.40	5.20	0.80	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	1	2	1	1	1	1	0	0	2	2	1	1	6	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150026	10	5.20	5.50	0.30	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	VELDT_GRASS
3150026	11	5.50	5.70	0.20	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	0	0	1	0	1	0	0	0	1	1	2	3	5	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150026	12	5.70	6.10	0.40	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	VELDT_GRASS
3150026	13	6.10	7.00	0.90	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	1	1	1	1	0	0	0	0	2	2	2	2	6	6	VELDT_GRASS
3150026	14	7.00	8.00	1.00	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	VELDT_GRASS
3150026	15	8.00	9.40	1.40	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	0	1	6	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150026	16	9.40	9.60	0.20	SPRIGGS FRASER RD	South	28-Oct-04	bert	40	2	2	2	1	1	1	0	0	2	2	2	1	9	7	VELDT_GRASS
3150026	17	9.60	10.20	0.60	SPRIGGS FRASER RD	South	28-Oct-04	bert	40	2	2	2	1	1	1	0	0	1	2	2	1	8	7	VELDT_GRASS
3150026	18	10.20	10.90	0.70	SPRIGGS FRASER RD	South	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	0	1	2	1	6	6	VELDT_GRASS
3150027	1	0.00	0.40	0.40	DE LYANINE NORTH RD	North	29-Oct-04	dana	20	2	2	2	2	1	1	0	0	2	2	1	1	8	8	VELDT_GRASS
3150027	2	0.40	2.50	2.10	DE LYANINE NORTH RD	North	29-Oct-04	dana	20	1	1	1	2	1	1	0	0	2	2	0	1	5	7	VELDT_GRASS
3150027	3	2.50	3.80	1.30	DE LYANINE NORTH RD	North	29-Oct-04	dana	20	1	1	2	2	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150027	4	3.80	4.20	0.40	DE LYANINE NORTH RD	North	29-Oct-04	dana	20	1	1	0	1	1	1	0	0	2	0	1	1	5	4	VELDT_GRASS
3150027	5	4.20	6.50	2.30	DE LYANINE NORTH RD	North	29-Oct-04	dana	20	2	2	2	1	1	1	0	0	0	2	1	1	5	8	VELDT_GRASS
3150027	6	6.50	7.10	0.60	DE LYANINE NORTH RD	North	29-Oct-04	dana	20	1	1	0	0	0	0	0	0	2	0	1	1	4	2	VELDT_GRASS
3150028	1	0.00	1.00	1.00	BOYALLING RD	South	29-Oct-04	dana	20	1	1	1	1	1	1	0	0	1	1	2	2	6	6	VELDT_GRASS
3150028	2	1.00	1.50	0.50	BOYALLING RD	South	29-Oct-04	dana	20	1	1	0	0	0	0	0	0	2	0	1	1	4	2	VELDT_GRASS
3150028	3	1.50	3.90	2.40	BOYALLING RD	South	29-Oct-04	dana	20	2	1	1	1	1	1	0	0	2	2	1	1	7	6	VELDT_GRASS
3150028	4	3.90	4.80	0.90	BOYALLING RD	South	29-Oct-04	dana	20	1	1	1	1	1	1	0	0	0	0	1	1	4	4	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150028	5	4.80	5.50	0.70	BOYALLING RD	South	29-Oct-04	dana	20	1	1	1	1	1	1	0	0	2	1	1	1	6	5	CAPE_TULIP
3150028	6	5.50	6.50	1.00	BOYALLING RD	South	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	CAPE_TULIP
3150028	7	6.50	7.10	0.60	BOYALLING RD	South	29-Oct-04	dana	20	1	2	1	0	0	1	0	0	0	0	2	2	4	5	
3150028	8	7.10	7.90	0.80	BOYALLING RD	South	29-Oct-04	dana	20	1	1	1	1	1	1	0	0	1	1	2	2	6	6	
3150030	1	0.00	0.80	0.80	WALKERS RD	West	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	0	1	2	2	6	7	VELDT_GRASS
3150030	2	0.80	1.30	0.50	WALKERS RD	West	27-Oct-04	horace	20	1	0	1	0	0	0	1	0	0	0	2	1	5	1	CAPE_TULIP VELDT_GRASS
3150030	3	1.30	2.90	1.60	WALKERS RD	West	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	CAPE_TULIP VELDT_GRASS
3150030	4	2.90	3.90	1.00	WALKERS RD	West	27-Oct-04	horace	20	1	2	0	1	0	0	0	0	1	2	2	2	4	7	CAPE_TULIP VELDT_GRASS
3150030	5	3.90	4.30	0.40	WALKERS RD	West	27-Oct-04	horace	20	1	1	1	1	0	0	0	0	2	0	1	1	5	3	
3150030	6	4.30	4.80	0.50	WALKERS RD	West	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	
3150030	7	4.80	5.30	0.50	WALKERS RD	West	27-Oct-04	horace	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	
3150030	8	5.30	5.60	0.30	WALKERS RD	West	27-Oct-04	horace	20	1	0	2	0	0	0	2	0	1	0	1	2	7	2	
3150030	9	5.60	6.10	0.50	WALKERS RD	West	27-Oct-04	horace	20	2	2	2	1	1	1	0	0	2	2	1	1	8	7	
3150030	10	6.10	6.80	0.70	WALKERS RD	West	27-Oct-04	horace	20	2	2	0	0	0	0	0	2	2	2	1	1	5	7	
3150030	11	6.80	7.00	0.20	WALKERS RD	West	27-Oct-04	horace	20	1	1	1	1	0	0	2	2	1	1	1	1	6	6	
3150030	12	7.00	7.60	0.60	WALKERS RD	West	27-Oct-04	horace	100	2	2	2	2	2	2	0	0	2	2	0	0	8	8	
3150031	1	0.00	0.50	0.50	THOMPSON RD	South	27-Oct-04	HORACE J WILLIAMS	20	2	2	1	0	1	1	0	0	0	0	2	2	6	5	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150031	2	0.50	1.90	1.40	THOMPSON RD	South	27-Oct-04	HORACE J WILLIAMS	20	2	2	1	1	1	1	0	0	1	2	1	1	6	7	SALT_AFFECTED_ROADSIDE
3150031	3	1.90	2.90	1.00	THOMPSON RD	South	27-Oct-04	HORACE J WILLIAMS	20	1	1	0	1	0	0	0	0	2	1	2	1	5	4	
3150031	4	2.90	3.40	0.50	THOMPSON RD	South	27-Oct-04	HORACE J WILLIAMS	20	1	1	0	0	0	0	0	0	1	1	1	1	3	3	
3150031	5	3.40	3.60	0.20	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	2	1	1	1	1	1	2	0	2	2	1	2	8	7	
3150031	6	3.60	5.20	1.60	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	SALT_AFFECTED_ROADSIDE
3150031	7	5.20	5.70	0.50	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	2	2	1	1	0	0	0	0	2	2	1	1	6	6	
3150031	8	5.70	6.50	0.80	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	2	2	1	1	1	1	0	0	1	1	1	1	6	6	
3150031	9	6.50	6.80	0.30	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	1	1	0	0	0	0	0	0	0	0	2	1	3	2	
3150031	10	6.80	8.20	1.40	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	2	2	1	1	1	1	0	0	2	0	2	1	8	5	
3150031	11	8.20	8.40	0.20	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	2	2	1	1	2	2	2	2	2	1	2	2	11	10	
3150031	12	8.40	10.06	1.66	THOMPSON RD	West	27-Oct-04	HORACE J WILLIAMS	20	1	1	1	1	1	1	0	0	2	2	2	2	6	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150032	1	0.00	1.55	1.55	LIME LAKE EAST RD	East	20-Jul-05	J & A Kershaw		2	2	0	0	1	1	2	2	2	2	0	0	7	7	
3150032	2	1.55	4.20	2.65	LIME LAKE EAST RD	East	20-Jul-05	J & A Kershaw	20	0	0	0	0	0	0	1	1	1	1	2	2	4	4	WILD_RADISH
3150033	1	2.28	3.18	0.9	URQUHART RD	West	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	1	1	1	1	3	3	
3150033	2	3.18	4.18	1	URQUHART RD	West	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	
3150034	1	0.00	1.10	1.10	SPRIGG RD	West	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	VELDT_GRASS
3150034	2	1.10	2.70	1.60	SPRIGG RD	West	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	1	2	2	2	4	5	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150034	3	2.70	2.90	0.20	SPRIGG RD	West	20-Jul-05	Bec&Kate	20	2	0	1	0	1	0	2	0	2	1	2	2	10	3	
3150034	4	2.90	5.90	3.00	SPRIGG RD	West	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	WILD_RADISH
3150035	1	0.00	1.55	1.55	QUEEREARRUP RD	South	23-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	
3150035	2	1.55	2.15	0.60	QUEEREARRUP RD	South	23-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	2	2	0	2	3	5	VELDT_GRASS
3150035	3	2.15	2.65	0.50	QUEEREARRUP RD	South	23-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	2	2	0	0	3	3	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150035	4	2.65	3.65	1.00	QUEEREARRUP RD	South	23-Oct-04	kershaw	20	2	2	0	0	0	0	0	0	1	2	2	0	5	4	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150035	5	3.65	5.95	2.30	QUEEREARRUP RD	South	23-Oct-04	kershaw	20	1	2	1	1	0	0	1	1	1	2	2	2	6	8	VELDT_GRASS
3150036	1	0.00	5.94	5.94	CAILES RD	South	23-Oct-04	kershaw	20	1	1	1	1	1	1	0	0	2	1	2	2	7	6	VELDT_GRASS
3150037	1	0.00	1.70	1.70	CHESTER RD	South	28-Oct-04	mark	20	2	2	1	2	0	1	2	0	2	2	2	0	9	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150037	2	1.70	3.30	1.60	CHESTER RD	South	28-Oct-04	mark	20	1	1	0	0	0	0	1	1	2	2	2	2	6	6	VELDT_GRASS
3150038	1	0.00	2.00	2.00	NALLIAN RD	East	27-Oct-04	mark	20	2	2	1	1	1	0	0	0	0	0	0	1	4	4	VELDT_GRASS
3150038	2	2.00	2.60	0.60	NALLIAN RD	East	27-Oct-04	mark	20	2	2	1	0	1	0	0	0	2	1	0	1	6	4	VELDT_GRASS
3150038	3	2.60	6.30	3.70	NALLIAN RD	East	27-Oct-04	mark	20	2	2	1	0	0	0	0	0	0	2	2	1	5	5	VELDT_GRASS
3150039	1	0.00	3.30	3.30	GUNDARING NTH RD	South	28-Oct-04	nk	20	1	2	0	1	1	1	0	0	2	2	2	2	6	8	
3150039	2	3.30	4.66	1.36	GUNDARING NTH RD	South	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	BRIDAL_CREEPER SALT_AFFECTED_ROADSIDE
3150039	3	4.66	7.56	2.90	GUNDARING NTH RD	South	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	BRIDAL_CREEPER
3150040	1	0.00	2.40	2.40	PEDERICK RD	West	24-Oct-04	kershaw	20	1	1	1	1	0	0	0	0	2	2	1	1	5	5	SALT_AFFECTED_ROADSIDE

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150040	2	2.40	3.00	0.60	PEDERICK RD	West	24-Oct-04	kershaw	20	0	1	0	0	0	0	0	0	0	0	1	1	1	2	
3150040	3	3.00	4.90	1.90	PEDERICK RD	West	24-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	1	1	1	1	3	3	
3150041	1	0.00	6.60	6.60	HARRIS RD	North	23-Oct-04	kershaw	20	2	2	0	0	1	1	0	0	2	2	2	2	7	7	
3150043	1	0.00	1.60	1.60	ARMSTRONG RD	West	20-Jul-05	Bec&Kate	20	1	1	1	1	0	0	0	0	1	1	2	1	5	5	BRIDAL_CREEPER SOURSOB VELDT_GRASS
3150043	2	1.60	2.03	0.43	ARMSTRONG RD	West	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	0	0	2	1	3	2	
3150044	1	0.00	1.30	1.30	JESSUP RD	South	29-Oct-04	dana	20	2	2	2	1	1	1	0	0	2	2	1	1	8	7	
3150044	2	1.30	2.10	0.80	JESSUP RD	South	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	SALT_AFFECTED_ROADSIDE
3150044	3	2.10	3.00	0.90	JESSUP RD	South	29-Oct-04	dana	20	1	2	1	1	1	1	0	0	2	2	2	2	7	8	
3150044	4	3.00	3.40	0.40	JESSUP RD	South	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	
3150044	5	3.40	5.30	1.90	JESSUP RD	South	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	SALT_AFFECTED_ROADSIDE
3150044	6	5.30	6.20	0.90	JESSUP RD	South	29-Oct-04	dana	20	2	2	1	1	2	1	0	0	2	2	1	1	8	7	
3150044	7	6.20	6.70	0.50	JESSUP RD	South	29-Oct-04	dana	20	2	2	1	1	1	1	0	0	2	2	0	1	6	7	
3150045	1	0.00	0.70	0.70	DELLYANINE RD	West	24-Oct-04	kershaw	20	2	2	2	2	2	2	2	2	2	2	0	1	10	11	
3150045	2	0.70	1.60	0.90	DELLYANINE RD	West	24-Oct-04	kershaw	20	2	2	2	2	2	2	1	1	2	2	1	1	10	10	
3150046	1	0.00	0.40	0.40	PROSSERS RD	South	24-Oct-04	kershaw	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3150046	2	0.40	1.00	0.60	PROSSERS RD	South	24-Oct-04	kershaw	20	2	2	2	2	2	2	2	2	1	1	1	1	10	10	
3150046	3	1.00	2.41	1.41	PROSSERS RD	South	24-Oct-04	kershaw	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150047	1	0.00	2.08	2.08	KERSHAWS RD	South	23-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	
3150048	1	0.00	1.70	1.70	FLAGSTAFF RD	South	24-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	2	2	1	1	4	4	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150048	2	1.70	1.90	0.20	FLAGSTAFF RD	South	24-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	2	2	0	1	3	4	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150050	1	0.00	0.70	0.70	BODDINGTON RD	West	23-Oct-04	kershaw	20	1	2	1	1	0	0	0	0	0	1	2	0	4	4	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150050	2	0.70	3.20	2.50	BODDINGTON RD	West	23-Oct-04	kershaw	20	1	1	1	1	1	1	0	0	2	2	2	2	7	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150051	1	0.00	4.10	4.10	BECKER RD	West	24-Oct-04	kershaw	20	1	0	1	1	1	1	0	0	2	2	1	1	6	5	SALT_AFFECTED_ROADSIDE
3150051	2	4.10	5.10	1.00	BECKER RD	South	24-Oct-04	kershaw	20	1	1	0	0	0	0	0	0	1	1	1	1	3	3	SALT_AFFECTED_ROADSIDE
3150051	3	5.10	6.20	1.10	BECKER RD	South	24-Oct-04	kershaw	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
3150051	4	6.20	6.70	0.50	BECKER RD	South	24-Oct-04	kershaw	20	2	2	1	1	2	1	2	1	2	2	0	2	9	9	
3150051	5	6.70	6.94	0.24	BECKER RD	South	24-Oct-04	kershaw	20	2	2	1	1	2	2	2	2	2	2	0	0	9	9	
3150052	1	0.00	1.00	1.00	KENNETTS RD	East	24-Oct-04	kershaw	20	2	2	1	1	1	1	0	0	1	2	2	1	7	7	
3150054	1	0.00	0.57	0.57	CONDINING RD	North	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	1	1	1	1	6	6	
3150054	2	0.57	0.87	0.30	CONDINING RD	North	27-Oct-04	horace	20	2	2	0	0	0	0	0	0	0	1	2	2	4	5	
3150054	3	0.87	1.37	0.50	CONDINING RD	North	27-Oct-04	horace	20	1	1	1	1	0	0	0	0	0	0	2	2	4	4	
3150055	1	0.00	0.90	0.90	PIESSE RD	North	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	1	1	1	1	6	6	
3150055	2	0.90	1.63	0.73	PIESSE RD	North	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	1	1	1	1	6	6	
3150056	1	0.00	0.40	0.40	APPLETON RD	West	20-Jul-05	Bec&Kate	20	1	1	0	0	1	1	0	0	2	2	2	2	6	6	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150056	2	0.40	0.80	0.40	APPLETON RD	West	20-Jul-05	Bec&Kate		2	2	1	1	1	1	2	2	1	2	0	0	7	8	
3150056	3	0.80	2.60	1.80	APPLETON RD	West	20-Jul-05	Bec&Kate	20	1	1	1	0	0	0	0	0	1	1	2	2	5	4	
3150057	1	0.00	1.80	1.80	WATSON RD	West	20-Jul-05	Bec & Kate	20	1	1	0	0	1	1	0	0	2	2	2	2	6	6	VELDT_GRASS
3150057	2	1.80	3.70	1.90	WATSON RD	West	20-Jul-05	Bec&Kate	20	2	1	1	0	1	1	0	0	2	2	2	2	8	6	VELDT_GRASS
3150058	1	2.02	2.12	0.10	GANZER RD	West	28-Oct-04	bert	20	1	1	1	1	0	0	2	0	2	1	2	1	8	4	
3150058	2	2.12	3.02	0.90	GANZER RD	West	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	0	0	2	1	3	2	
3150058	3	3.02	3.82	0.80	GANZER RD	West	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	0	1	1	1	2	3	
3150058	4	3.82	4.62	0.80	GANZER RD	West	28-Oct-04	bert	20	2	2	1	1	0	0	0	0	2	1	1	1	6	5	
3150058	5	4.62	5.22	0.60	GANZER RD	West	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	1	0	2	2	4	3	
3150061	1	0.00	0.30	0.30	CARBERDINE POOL RD	North	28-Oct-04	bert	20	1	1	1	1	1	1	0	0	1	1	1	1	5	5	VELDT_GRASS
3150061	2	0.30	0.60	0.30	CARBERDINE POOL RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150061	3	0.60	1.90	1.30	CARBERDINE POOL RD	North	28-Oct-04	bert	20	1	1	1	1	0	0	1	2	2	1	1	1	6	6	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150061	4	1.90	2.20	0.30	CARBERDINE POOL RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	1	1	1	7	6	VELDT_GRASS
3150061	5	2.20	2.57	0.37	CARBERDINE POOL RD	North	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	1	0	1	1	3	2	VELDT_GRASS
3150063	1	0.00	0.40	0.40	NELSON RD	North	28-Oct-04	bert	20	1	1	1	1	0	0	0	0	2	2	1	1	5	5	
3150063	2	0.40	1.00	0.60	NELSON RD	North	28-Oct-04	bert	20	2	2	1	1	0	0	2	2	2	2	0	1	7	8	
3150063	3	1.00	1.60	0.60	NELSON RD	North	28-Oct-04	bert	20	1	1	1	1	1	1	0	0	1	1	1	1	5	5	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150063	4	1.60	2.10	0.50	NELSON RD	North	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	
3150063	5	2.10	3.10	1.00	NELSON RD	North	28-Oct-04	bert	20	1	1	1	1	0	0	0	0	0	0	2	2	4	4	
3150063	6	3.10	3.80	0.70	NELSON RD	North	28-Oct-04	bert	20	1	1	0	0	0	0	0	0	2	0	1	2	4	3	
3150064	1	0.00	0.40	0.40	BADGARNING RD	East	28-Oct-04	bert	20	1	1	1	1	0	0	0	2	1	2	1	2	4	8	
3150064	2	0.40	0.70	0.30	BADGARNING RD	East	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	
3150064	3	0.70	2.40	1.70	BADGARNING RD	East	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	1	1	1	7	6	
3150064	4	2.40	2.90	0.50	BADGARNING RD	East	28-Oct-04	bert	20	2	2	1	0	1	1	0	0	2	2	1	0	7	5	
3150064	5	2.90	3.30	0.40	BADGARNING RD	East	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	1	0	7	6	
3150064	6	3.30	5.70	2.40	BADGARNING RD	East	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	1	2	1	1	6	7	SALT_AFFECTED_ROADSIDE
3150064	7	5.70	6.70	1.00	BADGARNING RD	East	28-Oct-04	bert	20	1	1	1	0	1	0	0	0	1	1	2	1	6	3	
3150064	8	6.70	7.00	0.30	BADGARNING RD	East	28-Oct-04	bert	20	1	2	1	1	1	1	0	0	1	0	2	1	6	5	
3150064	9	7.00	7.40	0.40	BADGARNING RD	East	28-Oct-04	bert	20	2	2	1	1	1	1	0	0	2	2	0	0	6	6	
3150065	1	0.00	0.80	0.80	BOLTS RD	North	27-Oct-04	horace	40	2	2	1	2	1	2	2	2	0	2	2	0	8	10	
3150065	2	0.80	1.30	0.50	BOLTS RD	North	27-Oct-04	horace	40	2	2	1	1	1	1	0	0	1	2	1	0	6	6	VELDT_GRASS
3150065	3	1.30	1.70	0.40	BOLTS RD	North	27-Oct-04	horace	20	1	1	0	0	0	0	0	0	2	1	2	1	5	3	VELDT_GRASS
3150065	4	1.70	2.20	0.50	BOLTS RD	North	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	1	2	2	1	7	7	VELDT_GRASS
3150065	5	2.20	2.40	0.20	BOLTS RD	North	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	1	2	1	1	6	7	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150065	6	2.40	2.80	0.40	BOLTS RD	North	27-Oct-04	horace	20	1	1	1	1	0	0	2	2	2	2	1	1	7	7	VELDT_GRASS
3150065	7	2.80	6.70	3.90	BOLTS RD	North	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	VELDT_GRASS
3150066	1	0.00	0.80	0.80	TILLELLAN RD	South	28-Oct-04	bert	20	1	1	1	0	1	0	0	0	2	0	1	1	6	2	
3150066	2	0.80	1.10	0.30	TILLELLAN RD	South	28-Oct-04	bert	20	1	1	1	1	1	1	0	0	1	1	1	1	5	5	BRIDAL_CREEPER VELDT_GRASS
3150066	3	1.10	1.50	0.40	TILLELLAN RD	South	28-Oct-04	bert	20	1	1	1	0	0	0	0	0	1	0	1	1	4	2	BRIDAL_CREEPER VELDT_GRASS
3150067	1	0.00	1.00	1.00	MORGAN RD	North	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	SALT_AFFECTED_ROADSIDE
3150067	2	1.00	2.60	1.60	MORGAN RD	North	28-Oct-04	nk	20	2	2	1	0	1	1	0	0	2	2	0	2	6	7	SALT_AFFECTED_ROADSIDE
3150067	3	2.60	3.90	1.30	MORGAN RD	North	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	SALT_AFFECTED_ROADSIDE
3150068	1	0.00	0.50	0.50	SMITHS RD	North	28-Oct-04	nk	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3150068	2	0.50	2.70	2.20	SMITHS RD	North	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	
3150068	3	2.70	3.50	0.80	SMITHS RD	North	28-Oct-04	nk	20	2	1	2	0	2	0	0	0	2	0	0	2	8	3	SALT_AFFECTED_ROADSIDE
3150069	1	0.19	1.29	1.10	WARDS RD	South	21-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	2	2	2	2	5	5	VELDT_GRASS
3150070	1	0.00	0.90	0.90	JEFFRIS RD	North	28-Oct-04	HORACE	20	2	2	1	1	1	0	0	0	2	2	1	1	7	6	
3150070	2	0.90	3.20	2.30	JEFFRIS RD	North	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	
3150071	1	0.00	1.60	1.60	HEIGHTS TIE RD	South	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	2	1	8	7	SALT_AFFECTED_ROADSIDE
3150072	1	0.00	3.80	3.80	PAINTERS RD	East	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	SALT_AFFECTED_ROADSIDE
3150072	2	3.80	4.50	0.70	PAINTERS RD	East	28-Oct-04	nk	20	2	2	1	1	1	1	2	2	2	2	2	2	10	10	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150072	3	4.50	5.00	0.50	PAINTERS RD	East	28-Oct-04	nk	20	1	1	2	1	1	1	0	0	2	2	0	2	6	7	
3150072	4	5.00	5.80	0.80	PAINTERS RD	East	28-Oct-04	nk	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	
3150073	1	0.00	1.00	1.00	MARKHAM RD	South	21-Jul-05	J & A Kershaw	20	1	1	0	0	1	1	1	1	2	1	1	1	6	5	
3150075	1	0.00	3.30	3.30	FARROW RD	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	1	2	1	1	6	7	
3150075	2	3.30	4.60	1.30	FARROW RD	East	28-Oct-04	HORACE	20	2	2	0	0	0	0	0	0	0	2	2	2	4	6	
3150076	1	0.00	0.60	0.60	VAGG RD	East	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	
3150076	2	0.60	2.50	1.90	VAGG RD	East	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	2	2	2	2	6	6	
3150076	3	2.50	3.20	0.70	VAGG RD	East	27-Oct-04	nathan	20	2	2	1	1	0	0	0	0	1	0	2	2	6	5	
3150077	1	0.00	1.10	1.10	HOLME RD	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	
3150077	2	1.10	3.20	2.10	HOLME RD	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	0	1	6	7	
3150080	1	0.00	6.28	6.28	EDWARDS RD	North	20-Jul-05	Bec&Kate	40	1	1	0	0	0	0	0	0	1	1	1	1	3	3	
3150080	2	6.28	10.28	4.00	EDWARDS RD	North	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	1	2	2	2	4	5	
3150081	1	0.00	1.10	1.10	EVANS RD	West	26-Oct-04	rowena	20	2	2	1	1	1	1	1	1	1	0	1	1	7	6	WILD_RADISH
3150081	2	1.10	2.60	1.50	EVANS RD	West	26-Oct-04	rowena	20	2	2	1	1	1	1	0	0	0	0	1	1	5	5	
3150081	3	2.60	3.30	0.70	EVANS RD	West	26-Oct-04	rowena	20	1	1	1	1	0	0	2	2	2	0	1	2	7	6	
3150081	4	3.30	3.90	0.60	EVANS RD	West	26-Oct-04	rowena	20	1	1	0	0	0	0	2	2	1	2	1	2	5	7	
3150081	5	3.90	4.20	0.30	EVANS RD	West	26-Oct-04	rowena	20	2	1	1	1	1	1	0	0	0	0	2	1	6	4	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150083	1	0.00	2.20	2.20	MCDOUGALLS RD	North	27-Oct-04	mark	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	SALT_AFFECTED_ROADSIDE
3150084	1	0.00	2.00	2.00	HALLS RD	North	27-Oct-04	mark	20	2	2	1	1	1	1	0	0	0	2	2	2	6	8	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150085	1	0.00	0.70	0.70	MORCOMBE RD	North	26-Oct-04	rowena	20	2	2	1	1	1	1	0	0	1	1	2	2	7	7	
3150085	2	0.70	1.70	1.00	MORCOMBE RD	North	26-Oct-04	rowena	20	2	2	1	1	0	0	2	2	2	2	1	1	8	8	
3150085	3	1.70	2.40	0.70	MORCOMBE RD	North	26-Oct-04	rowena	20	2	2	1	1	0	0	0	0	1	0	1	1	5	4	
3150085	4	2.40	3.50	1.10	MORCOMBE RD	North	26-Oct-04	rowena	20	1	2	0	0	0	0	0	0	2	2	1	0	4	4	
3150085	5	3.50	4.30	0.80	MORCOMBE RD	North	26-Oct-04	rowena	20	2	2	1	1	0	0	0	0	2	2	1	1	6	6	
3150086	1	0.00	1.20	1.20	CAMERONS RD	East	26-Oct-04	rowena	20	2	2	0	0	0	1	0	0	0	2	2	2	4	7	
3150086	2	1.20	1.60	0.40	CAMERONS RD	East	26-Oct-04	rowena	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	
3150086	3	1.60	2.20	0.60	CAMERONS RD	East	26-Oct-04	rowena	20	2	2	0	0	0	0	0	0	1	0	1	1	4	3	
3150086	4	2.20	2.80	0.60	CAMERONS RD	East	26-Oct-04	rowena	20	2	2	0	1	0	0	0	0	1	2	1	1	4	6	
3150086	5	2.80	3.10	0.30	CAMERONS RD	East	26-Oct-04	rowena	20	2	2	1	1	0	0	0	0	1	0	0	2	4	5	
3150086	6	3.10	3.90	0.80	CAMERONS RD	East	26-Oct-04	rowena	20	1	1	1	0	0	0	2	1	2	1	1	1	7	4	
3150086	7	3.90	4.60	0.70	CAMERONS RD	East	26-Oct-04	rowena	20	1	2	1	1	1	1	0	0	2	2	1	1	6	7	
3150087	1	0.00	4.60	4.60	ROBINSON RD	North	27-Oct-04	mark	20	2	2	0	0	0	0	0	0	2	2	2	2	6	6	VELDT_GRASS
3150087	2	4.60	9.60	5.00	ROBINSON RD	North	27-Oct-04	mark	20	2	2	0	0	0	0	0	0	0	0	2	2	4	4	SOURSOB VELDT_GRASS
3150089	1	0.00	1.30	1.30	DWELYERDINE RD	West	28-Oct-04	nk	20	1	2	1	2	1	2	0	0	2	2	2	0	7	8	VELDT_GRASS WILD_RADISH

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150089	2	1.30	6.90	5.60	DWELYERDINE RD	West	28-Oct-04	nk	20	2	1	1	1	1	1	0	0	1	2	2	2	7	7	VELDT_GRASS WILD_RADISH
3150090	1	0.00	1.00	1.00	ANGWINS RD	North	28-Oct-04	HORACE	20	1	1	0	1	0	1	0	0	1	1	2	2	4	6	
3150090	2	1.00	1.20	0.20	ANGWINS RD	North	28-Oct-04	HORACE	20	2	2	1	0	2	0	2	2	2	1	0	1	9	6	
3150090	3	1.20	3.40	2.20	ANGWINS RD	North	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	1	2	7	8	
3150090	4	3.40	4.10	0.70	ANGWINS RD	North	28-Oct-04	HORACE	20	2	1	1	0	1	0	1	0	1	1	2	1	8	3	VELDT_GRASS
3150090	5	4.10	5.10	1.00	ANGWINS RD	North	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	1	1	2	1	7	6	VELDT_GRASS
3150090	6	5.10	7.30	2.20	ANGWINS RD	North	28-Oct-04	HORACE	20	2	2	2	2	1	1	0	0	2	2	2	1	9	8	VELDT_GRASS
3150091	1	0.00	2.30	2.30	MURDOCK RD	North	27-Oct-04	mark	20	2	1	0	0	0	0	0	0	0	0	2	2	4	3	BRIDAL_CREEPER
3150091	2	2.30	4.70	2.40	MURDOCK RD	North	27-Oct-04	mark	20	2	1	1	0	0	0	0	1	2	1	2	2	7	5	VELDT_GRASS
3150092	1	0.00	1.60	1.60	BALL RD	South	28-Oct-04	mark	20	2	2	1	1	0	0	1	1	2	2	2	2	8	8	
3150092	2	1.60	6.50	4.90	BALL RD	South	28-Oct-04	mark	20	2	2	1	1	1	1	1	1	2	2	2	2	9	9	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150094	1	0.00	2.30	2.30	BALLAYING WEST	East	28-Oct-04	mark	20	1	2	0	0	0	0	0	0	1	1	2	2	4	5	SALT_AFFECTED_ROADSIDE
3150094	2	2.30	4.10	1.80	BALLAYING WEST	East	28-Oct-04	mark	20	0	1	0	0	0	0	0	0	0	0	1	2	1	3	
3150095	1	0.00	0.60	0.60	WESTS RD	South	28-Oct-04	mark	20	2	2	1	1	0	0	0	0	2	1	2	2	7	6	
3150097	1	0.00	1.50	1.50	BLACKS RD	East	28-Oct-04	mark	20	2	2	0	0	0	0	1	1	2	2	2	2	7	7	VELDT_GRASS
3150097	2	1.50	2.40	0.90	BLACKS RD	East	28-Oct-04	mark	20	0	2	0	1	0	1	1	2	0	2	2	0	3	8	VELDT_GRASS
3150097	3	2.40	3.22	0.82	BLACKS RD	East	28-Oct-04	mark	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150098	1	0.00	2.40	2.40	BOSENBERG RD	North	28-Oct-04	mark	20	2	2	0	0	0	0	1	1	2	2	2	2	7	7	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150099	1	0.00	3.30	3.30	PUNTAPING RD	South	28-Oct-04	mark	20	2	2	0	2	0	0	1	2	2	2	2	2	7	10	VELDT_GRASS
3150100	1	0.00	0.16	0.16	RISEBOROUGH RD	West	28-Oct-04	mark	20	1	1	1	1	0	0	1	1	2	2	2	2	7	7	
3150100	2	0.16	4.36	4.20	RISEBOROUGH RD	West	28-Oct-04	mark	20	1	2	0	0	0	0	0	0	0	2	2	2	3	6	SALT_AFFECTED_ROADSIDE
3150100	3	4.36	5.36	1.00	RISEBOROUGH RD	West	28-Oct-04	mark	20	1	2	0	1	0	1	0	0	0	2	0	2	1	8	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150100	4	5.36	5.96	0.60	RISEBOROUGH RD	West	28-Oct-04	mark	20	1	2	0	1	0	1	1	2	2	2	0	2	4	10	VELDT_GRASS SALT_AFFECTED_ROADSIDE
3150100	5	5.96	8.46	2.50	RISEBOROUGH RD	West	28-Oct-04	mark	20	2	2	1	1	0	0	1	1	2	2	2	2	8	8	VELDT_GRASS
3150102	1	0.00	0.90	0.90	MANGLAVITE RD	West	27-Oct-04	mark	20	2	2	2	1	2	2	2	2	2	2	0	0	10	9	
3150104	1	2.04	3.04	1.00	KOOBADONG RD	South	20-Jul-05	Bec&Kate	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	VELDT_GRASS
3150104	2	3.04	4.84	1.80	KOOBADONG RD	South	20-Jul-05	Bec&Kate	20	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
3150104	3	4.84	5.24	0.40	KOOBADONG RD	South	20-Jul-05	Bec&Kate	20	2	2	1	1	1	1	1	1	1	1	2	2	8	8	
3150104	4	5.24	5.54	0.30	KOOBADONG RD	South	20-Jul-05	Bec&Kate	20	1	1	0	0	0	0	0	0	1	1	2	2	4	4	
3150106	1	0.00	2.10	2.10	FROSTS RD	South	28-Oct-04	mark	20	2	2	1	1	0	0	1	1	2	2	2	2	8	8	SALT_AFFECTED_ROADSIDE
3150150	1	0.00	0.30	0.30	MOORE ST	East	27-Oct-04	horace	20	2	2	1	1	1	1	2	2	2	2	0	0	8	8	VELDT_GRASS
3150150	2	0.30	0.90	0.60	MOORE ST	East	27-Oct-04	horace	20	1	2	0	1	0	0	0	0	0	0	1	0	2	3	VELDT_GRASS
3150150	3	0.90	1.40	0.50	MOORE ST	East	27-Oct-04	horace	20	2	2	1	1	1	1	0	0	2	2	1	0	7	6	
3150172	1	0.00	0.60	0.60	SOUTH RD	North	27-Oct-04	nathan	20	2	2	0	1	0	1	0	0	0	0	2	2	4	6	

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
3150172	2	0.60	1.30	0.70	SOUTH RD	North	27-Oct-04	nathan	20	2	2	0	0	0	0	0	0	0	2	2	2	4	6	
3150174	1	0.00	0.50	0.50	WEBB RD	East	20-Jul-05	Bec&Kate	20	0	1	0	1	0	0	0	0	0	1	1	1	1	4	VELDT_GRASS
3150174	2	0.50	0.90	0.40	WEBB RD	East	20-Jul-05	Bec&Kate	20	2	2	1	1	1	1	1	1	2	2	0	0	7	7	BRIDAL_CREEPER
3150174	3	0.90	1.25	0.35	WEBB RD	East	20-Jul-05	Bec&Kate	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3150174	4	1.25	1.90	0.65	WEBB RD	East	20-Jul-05	Bec&Kate	20	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
3150178	1	0.00	1.70	1.70	JENZ RD	East	28-Oct-04	mark	20	1	1	1	1	0	0	0	0	1	0	2	2	5	4	VELDT_GRASS
3150178	2	1.70	3.10	1.40	JENZ RD	East	28-Oct-04	mark	20	1	0	0	0	0	0	1	1	0	0	2	2	4	3	VELDT_GRASS
3150178	3	3.10	5.50	2.40	JENZ RD	East	28-Oct-04	mark	20	1	1	1	1	0	0	2	2	2	2	2	2	8	8	VELDT_GRASS
3150206	1	0.00	1.90	1.90	PHILLIPS RD	East	20-Jul-05	Bec&Kate		0	2	0	1	0	1	2	2	0	2	1	2	3	10	
M031	1	194.39	194.97	0.58	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	100	2	2	1	1	1	1	0	0	2	2	1	1	7	7	
M031	2	194.97	195.47	0.50	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	100	1	2	0	1	0	0	0	1	1	2	1	1	3	7	
M031	3	195.47	195.67	0.20	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	100	2	2	1	1	1	1	0	0	2	1	2	1	8	6	
M031	4	195.67	196.17	0.50	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	100	2	2	0	1	0	1	0	0	2	2	2	1	6	7	
M031	5	196.17	197.57	1.40	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	100	2	1	1	1	1	1	2	0	2	2	0	1	8	6	
M031	6	197.57	198.27	0.70	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	60	2	2	1	1	1	1	0	0	1	2	0	0	5	6	SALT_AFFECTED_ROADSIDE
M031	7	198.27	200.07	1.80	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	20	0	2	1	1	1	1	2	0	2	2	0	1	6	7	
M031	8	200.07	201.07	1.00	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	40	2	2	1	1	1	1	0	0	2	2	1	1	7	7	SALT_AFFECTED_ROADSIDE

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
M031	9	201.07	210.07	9.00	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	40	2	2	2	2	1	1	0	0	1	2	1	1	7	8	
M031	10	210.07	211.07	1.00	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	40	2	2	2	1	1	1	0	0	2	2	0	1	7	7	
M031	11	211.07	211.67	0.60	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	40	2	2	2	2	2	2	2	2	2	2	0	0	10	10	
M031	12	211.67	212.17	0.50	NORTHAM-CRANBROOK HWY	South	27-Oct-04	horacew	20	2	2	1	1	1	1	0	0	2	2	0	0	6	6	
M031	1	217.16	217.86	0.70	NORTHAM-CRANBROOK HWY	South	20-Jul-05	kershaw	20	0	0	0	0	0	0	2	2	0	0	1	0	3	2	
M031	2	217.86	219.56	1.70	NORTHAM-CRANBROOK HWY	South	20-Jul-05	kershaw		1	1	0	0	0	0	1	1	1	1	1	0	4	3	BRIDAL_CREEPER VELDT_GRASS WILD_RADISH SALT_AFFECTED_ROADSIDE
M031	3	219.56	221.96	2.40	NORTHAM-CRANBROOK HWY	South	20-Jul-05	kershaw		1	1	0	0	1	1	2	2	1	2	1	2	6	8	BRIDAL_CREEPER WILD_RADISH
M031	4	221.96	223.96	2.00	NORTHAM-CRANBROOK HWY	South	20-Jul-05	kershaw		2	2	0	1	1	1	1	1	1	2	1	2	6	9	WILD_RADISH
M031	5	223.96	229.16	5.20	NORTHAM-CRANBROOK HWY	South	20-Jul-05	kershaw		2	0	0	0	0	0	2	2	2	2	1	2	7	6	WILD_RADISH
M031	6	229.16	230.46	1.30	NORTHAM-CRANBROOK HWY	South	20-Jul-05	kershaw		2	2	0	0	1	2	2	2	2	2	1	0	8	8	WILD_RADISH
M031	7	230.46	231.36	0.90	NORTHAM-CRANBROOK HWY	South	20-Jul-05	kershaw		2	0	0	0	0	0	2	1	0	0	2	2	6	3	WILD_RADISH
M037	1	132.06	133.26	1.20	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	2	2	0	1	0	1	0	0	1	2	0	0	3	6	VELDT_GRASS WILD_RADISH
M037	2	133.26	144.06	10.80	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	2	2	1	1	1	1	0	0	0	2	1	1	5	7	VELDT_GRASS WILD_RADISH
M037	3	144.06	145.96	1.90	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	2	2	0	1	1	1	0	0	1	2	1	1	5	7	VELDT_GRASS WILD_RADISH
M037	4	145.96	149.66	3.70	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	1	2	1	2	1	2	0	0	1	2	1	1	5	9	VELDT_GRASS WILD_RADISH
M037	5	149.66	150.76	1.10	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	2	2	2	2	2	2	2	2	2	2	0	0	10	10	BRIDAL_CREEPER
M037	6	150.76	151.06	0.30	COLLIE-LAKE KING HWY	East	29-Oct-	dana	40	1	2	0	2	0	2	0	0	1	2	2	0	4	8	BRIDAL_CREEPER VELDT_GRASS

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
							04																	
M037	7	151.06	151.76	0.70	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	1	2	1	1	1	1	0	0	1	2	1	1	5	7	BRIDAL_CREEPER WILD_RADISH
M037	8	151.76	152.36	0.60	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	1	1	1	1	1	1	0	0	1	2	1	1	5	6	BRIDAL_CREEPER WILD_RADISH
M037	9	152.36	153.16	0.80	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	2	2	0	2	0	2	0	0	2	2	1	1	5	9	BRIDAL_CREEPER WILD_RADISH
M037	10	153.16	154.46	1.30	COLLIE-LAKE KING HWY	East	29-Oct-04	dana	40	1	2	0	2	0	2	0	0	0	1	1	1	2	8	
M037	11	157.23	159.73	2.50	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	CAPE_TULIP WILD_RADISH
M037	12	159.73	162.13	2.40	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	2	2	8	8	
M037	13	162.13	162.83	0.70	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	2	1	2	0	0	1	2	2	2	6	8	BRIDAL_CREEPER SALT_AFFECTED_ROADSIDE
M037	14	162.83	163.33	0.50	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	2	2	1	2	1	1	8	9	BRIDAL_CREEPER
M037	15	163.33	164.83	1.50	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	2	2	1	1	7	7	BRIDAL_CREEPER
M037	16	164.83	166.63	1.80	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	2	1	2	1	0	0	2	2	0	1	8	7	CAPE_TULIP SALT_AFFECTED_ROADSIDE
M037	17	166.63	167.73	1.10	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	2	2	2	2	0	0	2	2	0	0	8	8	CAPE_TULIP SALT_AFFECTED_ROADSIDE
M037	18	167.73	168.73	1.00	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	2	1	2	0	0	2	2	1	1	7	9	CAPE_TULIP SALT_AFFECTED_ROADSIDE
M037	19	168.73	169.43	0.70	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	2	2	2	2	0	0	2	2	0	0	8	8	SALT_AFFECTED_ROADSIDE
M037	20	169.43	173.13	3.70	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	1	2	1	1	1	1	2	2	1	2	1	2	7	10	WILD_RADISH
M037	21	173.13	175.73	2.60	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	1	2	2	2	7	8	SALT_AFFECTED_ROADSIDE
M037	22	175.73	176.23	0.50	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	2	1	1	0	0	1	2	2	0	7	7	
M037	23	176.23	177.73	1.50	COLLIE-LAKE	East	28-	HORACE	20	2	2	2	2	2	2	0	0	2	2	0	0	8	8	WILD_RADISH

ROAD#	Sect#	ODStart	ODFinish	Sect length	Road Name	Direction	Date	Observer	Width	Native Vegetation		Extent of Vegetation		# Native Plant Species		Weeds		Value as Biol. Corridor		Adjoining Landuse		Conservation Value Score (0-12)		Overlay Data
		(km)	(km)	(km)					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(listed if present)
					KING HWY		Oct-04																	VELDT_GRASS
M037	24	177.73	179.23	1.50	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	2	2	2	2	2	2	10	10	WILD_RADISH VELDT_GRASS
M037	25	179.23	181.13	1.90	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	1	1	0	1	0	1	0	0	1	1	2	1	4	5	WILD_RADISH VELDT_GRASS
M037	26	181.13	181.53	0.40	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	2	1	1	0	0	1	2	1	1	6	8	WILD_RADISH
M037	27	181.53	183.13	1.60	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	1	1	1	1	1	1	2	2	0	1	2	1	7	7	WILD_RADISH
M037	28	183.13	184.63	1.50	COLLIE-LAKE KING HWY	East	28-Oct-04	HORACE	20	2	2	1	1	1	1	0	0	1	1	1	1	6	6	

Appendix

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APPENDIX 3

Road names and lengths: Shire of Wagin

(Source- Main Roads WA 2004)

Road #	Road Name	Road length (km)
3150160	AIRFIELD RD	1.70
3150053	ANDREWS RD	3.22
3150197	ANDREWS ST	1.45
3150090	ANGWINS RD	7.47
3150088	ANGWINS TIE RD	1.85
3150056	APPLETON RD	2.60
3150043	ARMSTRONG RD	1.93
3150155	ARNOTT ST	0.37
3150064	BADGARNING RD	7.40
3150092	BALL RD	6.66
3150003	BALLAGIN RD	13.52
3150176	BALLAGIN ST	1.13
3150017	BALLAYING RD	1.15
3150018	BALLAYING SOUTH RD	12.05
3150094	BALLAYING WEST	6.62
3150123	BANK PL	0.14
3150093	BAXTERS RD	1.61
3150002	BEAUFORT RD	30.90
3150051	BECKER RD	6.94
3150121	BEDFORD LA	0.16
3150199	BEDFORD ST	0.18
3150006	BEHN ORD RD	14.22
3150097	BLACKS RD	3.22
3150125	BLYTHE LA	0.14
3150007	BOCKARING RD	9.65
3150050	BODDINGTON RD	3.22
3150210	BODDINGTON ST	0.37
3150065	BOLTS RD	6.70
3150098	BOSENBERG RD	3.22
3150028	BOYALLING RD	7.90
3150134	BRICK ST	0.19
3150004	BULLOCK HILLS RD	28.90
3150213	BUTTFIELD ST	0.75
3150036	CAILES RD	5.94
3150086	CAMERONS RD	5.64
3150193	CAMPBELL ST	0.34
3150061	CARBERDINE POOL RD	2.57
3150105	CARMODY RD	2.41
3150074	CARRIMURREN RD	1.45
3150189	CHARLES ST	0.12
3150037	CHESTER RD	3.27
3150008	COLLANILLING RD	18.27
3150054	CONDINING RD	1.37
3150161	COSTELLO ST	0.61
3150198	COWCHER RD	0.55
3150113	COWCHER ST	0.19
3150027	DE LYANINE NORTH RD	7.11
3150045	DELLYANINE RD	1.61
3150001	DONGOLOCKING RD	34.30
3150059	DRAYTON RD	1.88
3150089	DWELYERDINE RD	6.99
3150080	EDWARD'S RD	10.28

Road #	Road Name	Road length (km)
3150130	ETELOWIE ST	0.34
3150081	EVANS RD	4.18
3150075	FARROW RD	4.67
3150096	FAULKNERS RD	2.57
3150182	FISHER LA	0.13
3150049	FLAGSTAFF NORRING RD	1.61
3150048	FLAGSTAFF RD	7.89
3150101	FLEAYS RD	1.61
3150163	FORREST ST	0.61
3150106	FROSTS RD	2.13
3150060	FULLERS RD	3.67
3150208	GALTS LA	0.06
3150058	GANZER RD	5.22
3150214	GELL ST	0.16
3150187	GEORGE PLACE	0.06
3150190	GEORGE ST	0.26
3150186	GILES ST	0.31
3150216	GINN RD	3.55
3150146	GORDON ST	0.26
3150039	GUNDARING NTH RD	7.56
3150029	GUNDARING SOUTH	3.54
3150084	HALLS RD	2.03
3150201	HANTKE ST	0.22
3150041	HARRIS RD	6.50
3150019	HEIGHT RD	5.40
3150071	HEIGHTS TIE RD	1.61
3150077	HOLME RD	3.26
3150103	HUDSON RD	3.38
3150194	HUNT ST	0.22
3150119	INGRAM LA	0.11
3150005	JALORAN RD	19.54
3150070	JEFFRIS RD	3.38
3150178	JENZ RD	5.54
3150044	JESSUP RD	6.79
3150109	JOHNSTON ST	1.04
3150052	KENNETTS RD	1.02
3150047	KERSHAWS RD	2.08
3150124	KERSLEY LA	0.19
3150202	KERSLEY RD	0.22
3150159	KHEDIVE ST	1.37
3150173	KIRKS RD	1.30
3150145	KITCHENER ST	0.36
3150104	KOOBADONG RD	5.54
3150133	LEAKE WY	0.21
3150192	LEFROY ST	0.26
3150165	LEONORA ST	0.20
3150032	LIME LAKE EAST RD	4.25
3150013	LIME LAKE WEST	8.52
3150200	LLOYD ST NORTH	0.12
3150218	LLOYD ST SOUTH	0.11
3150020	LUCAS RD	8.03
3150137	LUKIN ST	0.11
3150102	MANGLAVITE RD	1.20
3150073	MARKHAM RD	1.05
3150083	MCDOUGALLS RD	2.07
3150128	MCKENNA ST	0.12
3150082	MCNAUGHTONS RD	1.61
3150212	MILLER ST	1.15

Road #	Road Name	Road length (km)
3150162	MITCHELL ST	0.25
3150150	MOORE ST	1.45
3150085	MORCOMBE RD	4.83
3150067	MORGAN RD	3.89
3150131	MORRIS ST	0.25
3150215	MOUNT LATHAM RD	0.83
3150091	MURDOCK RD	4.67
3150148	NALDER RD	0.38
3150038	NALLIAN RD	6.30
3150063	NELSON RD	3.70
3150149	NENKE ST	0.58
3150011	NOBLE RD	15.98
3150009	NORRING RD	11.16
3150010	NORRING-DELYANINE RD	17.70
3150164	OMDURMAN ST	1.13
3150185	PADBURY LA	0.22
3150072	PAINTERS RD	5.89
3150195	PEDERICK DR	0.16
3150040	PEDERICK RD	4.90
3150206	PHILLIPS RD	1.97
3150184	PIESSE LA	0.20
3150055	PIESSE RD	1.63
3150022	PIESSEVILLE-JALORAN RD	14.97
3150012	PIESSEVILLE-TARWONGA RD	20.05
3150046	PROSSERS RD	2.41
3150099	PUNTAPING RD	8.05
3150035	QUEEREARRUP RD	5.95
3150023	QUICKES RD	8.35
3150188	RANDALL ST	0.12
3150181	RANFORD LA	0.20
3150115	RANFORD ST	0.28
3150203	REEVES RD NORTH	2.80
3150211	RIDLEY ST	0.20
3150151	RIFLE RD	0.98
3150126	RIFLE ST	3.02
3150100	RISEBOROUGH RD	8.46
3150087	ROBINSON RD	12.68
3150021	ROWELLS RD	12.87
3150129	SAWLE ST	0.16
3150156	SCADDEN ST	0.68
3150196	SCOTT ST	1.02
3150147	SIRDAR ST	0.49
3150209	SIRDAR ST	0.34
3150068	SMITHS RD	3.60
3150172	SOUTH RD	1.29
3150175	SPOONER RD	1.61
3150034	SPRIGG RD	5.90
3150026	SPRIGGS FRASER RD	10.94
3150180	STRICKLAND LA	0.15
3150114	STRICKLAND RD	0.20
3150127	STUBBS ST	0.35
3150042	SUTHERLANDS RD	1.61
3150136	TARBET ST	0.35
3150141	TASMAN ST	0.18
3150158	TAVISTOCK ST	0.42
3150135	TAYLOR LANE	0.21
3150025	TAYLORS RD	8.91
3150142	TENNYSON ST	0.21

Road #	Road Name	Road length (km)
3150140	THETA ST	0.16
3150031	THOMPSON RD	10.06
3150207	THORNTON ST	0.42
3150179	THROSSELL LA	0.05
3150117	THROSSELL ST	0.42
3150066	TILLELLAN RD	4.83
3150024	TOOLIBIN SOUTH RD	9.33
3150132	TRAVERSE ST	0.83
3150143	TRENCH ST	0.23
3150062	TRENT ST	0.38
3150138	TRENTON ST	0.28
3150139	TRIMDON ST	0.34
3150144	TUDOR ST	1.17
3150110	ULTRA ST	0.26
3150108	UMBRA ST	0.67
3150111	UNA ST	0.94
3150157	UNICORN ST	1.05
3150183	UNION LA	0.07
3150112	UNION ST	0.43
3150120	UNIT ST	0.32
3150116	UPLAND ST	1.34
3150118	URBAN ST	0.70
3150033	URQUHART RD	4.18
3150122	USIL LA	0.14
3150076	VAGG RD	2.90
3150217	VAGG RD SLIP	0.26
3150191	VALE ST	0.20
3150204	VEALING ST	0.41
3150171	VENICE ST	0.21
3150152	VENTNOR ST	1.93
3150168	VERA ST	0.14
3150169	VERNAL ST	1.03
3150177	VERNON ST	1.20
3150154	VESPER ST	0.23
3150205	VICTOR RD	1.40
3150153	VICTOR ST	0.43
3150170	VINE ST	0.57
3150078	WAGIN-WICKEPIN RD	11.08
3150030	WALKERS RD	7.56
3150069	WARDS RD	1.29
3150166	WARE ST	1.95
3150079	WARNOCKS RD	1.93
3150015	WARUP NORTH RD	10.16
3150014	WARUP SOUTH RD	16.22
3150016	WARUP WEST	8.80
3150167	WARWICK ST	0.72
3150057	WATSON RD	3.78
3150174	WEBB RD	1.98
3150107	WENDELL ST	1.07
3150095	WESTS RD	0.60

Appendix

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APPENDIX 4

Flora species in the Shire of Wagin

(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 acanthoclada subsp. acanthoclada
Acacia acuminata
Acacia acuminata subsp. acuminata ms
Acacia acutata
Acacia brachyphylla var. recurvata P3
Acacia cassicula
Acacia celastrifolia
Acacia chrysocephala
Acacia crispula
Acacia erinacea
Acacia glaucoptera
Acacia grisea P4
Acacia kingiana X
Acacia lasiocarpa var. bracteolata
Acacia lasiocarpa var. sedifolia
Acacia leptopetala
Acacia leptospermoides subsp. leptospermoides
Acacia loxophylla
Acacia lullfitziorum ms P3
Acacia merinthophora
Acacia multispicata
Acacia pulchella var. glaberrima
Acacia pulviniformis
Acacia pycnocephala
**Acacia saligna* (Coojong)
Acacia squamata
Acacia stenoptera
Acacia subflexuosa subsp. subflexuosa
Acacia sulcata var. planoconvexa
Acacia tratmaniana
Acacia trigonophylla
Agrostocrinum scabrum
Allocasuarina huegeliana
Allocasuarina microstachya
Allocasuarina thuyoides
Amphibromus nervosus
Amphipogon turbinatus
Amyema preissii
Andersonia bifida P2
Andersonia carinata P2
Angianthus drummondii
Anigozanthos humilis subsp. humilis
Anthotium odontophyllum ms
Aotus diffusa ms
Aphelia brizula
Argentipallium niveum
Aristida contorta
**Asparagus asparagoides* (Bridal Creeper)
Astroloma aff. drummondii
Astroloma aff. epacridis
Astroloma cataphractum ms
Astroloma compactum
Astroloma drummondii
Astroloma epacridis
Astroloma microcalyx
Astroloma recurvum ms
Astroloma serratifolium
Atriplex amnicola
Austrodanthonia caespitosa
Austrodanthonia setacea
Austrostipa elegantissima
Austrostipa tenuifolia
Austrostipa trichophylla

Baeckea crispiflora
Banksia aff. ilicifolia
Banksia oligantha R
Banksia prionotes
Banksia sphaerocarpa var. caesia
Beaufortia interstans
Beaufortia schaueri
Billardiera bicolor
Billardiera bicolor var. bicolor
Billardiera lehmanniana
Blennospora drummondii
Borya laciniata
Borya nitida
Borya sphaerocephala
Bossiaea spinescens
Brachyscome perpusilla
Brachysema celsianum
**Briza minor* (Shivery Grass)
**Bromus diandrus* (Great Brome)
**Bromus hordeaceus* (Soft Brome)
**Buglossoides arvensis* (Corn Gromwell)

Caladenia caesarea subsp. caesarea ms
Caladenia chapmanii ms
Caladenia discoidea
Caladenia dorrienii R

Caladenia falcata
Caladenia filifera
Caladenia flaccida subsp. pulchra ms
Caladenia footeana ms
Caladenia hirta subsp. hirta ms
Caladenia hirta subsp. rosea ms
Caladenia integra P4
Caladenia latifolia
Caladenia longicauda subsp. eminens ms
Caladenia multiclavia
Caladenia pendens subsp. pendens ms
Caladenia polychroma ms
Caladenia radialis
Caladenia reptans ms
Caladenia reptans subsp. reptans ms
Caladenia roei
Caladenia saccharata
Caladenia uliginosa subsp. candicans ms
Caladenia x cala ms
Caladenia x triangularis P4
Caladenia xantha ms
Callitris canescens
Calothamnus planifolius
Calothamnus quadrifidus var. "unsorted"
Calytrix leschenaultii
Calytrix tetragona
**Carpobrotus edulis* (Hottentot fig)
Carpobrotus modestus
Cassytha glabella forma dispar
Cassytha melantha
Casuarina obesa
**Cenchrus echinatus* (Burrgrass)
**Centaurea melitensis* (Maltese cockspur)
Centrolepis polygyna
**Chamaecytisus palmensis* (Tagasaste)
Chamaescilla spiralis
Chamaexeros serra
Chamelaucium ciliatum
Chamelaucium megalopetalum
Chamelaucium naviculum ms
Chenopodium desertorum subsp. microphyllum
Chloanthes coccinea
Choretrum glomeratum var. glomeratum
Chorizema aciculare subsp. aciculare
Chorizema rhynchotropis
**Cirsium vulgare* (Spear Thistle)
Comesperma calymega
Comesperma ciliatum
Comesperma drummondii
Comesperma scoparium
Conospermum bracteosum
Conospermum croniniae
Conospermum distichum
Conospermum filifolium
Conospermum multispicatum
Conospermum stoechadis
Conostylis aculeata
Conostylis serrulata
**Cotula bipinnate* (Ferny Cotula)
Crassula colorata
Crassula decumbens var. decumbens
Crassula exserta
**Crassula natans var. minus* (Water Crassula)
Cryptandra arbutiflora var. arbutiflora
Cryptandra nutans
Cryptandra pungens
Cyanicula deformis ms
Cyanicula gemmata ms
Cyanicula sericea ms

Dampiera fasciculata
Dampiera haematotricha subsp. haematotricha
Dampiera lindleyi
Dampiera sacculata
Dampiera tenuicaulis var. tenuicaulis
Darwinia vestita
Daviesia incrassata subsp. incrassata ms
Dichopogon capillipes
Diplolaena graniticola
**Dittrichia graveolens* (Stinkwort)
Dodonaea bursariifolia
Dodonaea ceratocarpa
Dodonaea humifusa
Dodonaea pinifolia
Dodonaea viscosa subsp. angustissima
Drosera glanduligera
Drosera menziesii subsp. penicillaris
Dryandra armata
Dryandra armata var. ignicida
Dryandra conferta var. conferta ms
Dryandra cuneata
Dryandra cynaroides P4
Dryandra ferruginea subsp. ferruginea
Dryandra fraseri var. fraseri
Dryandra meganotia P3
Dryandra nivea subsp. nivea
Dryandra nobilis subsp. nobilis ms
Dryandra octotriginata
Dryandra porrecta P4
Dryandra preissii P4
Dryandra purdieana
Dryandra squarrosa subsp. squarrosa

**Ehrharta longiflora* (Annual Veldt Grass)
Elythranthera brunonis
Elythranthera emarginata
Epilobium hirtigerum
Eremaea pauciflora var. pauciflora
Eremophila lehmanniana
Eriochilus scaber subsp. scaber ms
Eriostemon gardneri
Eriostemon nodiflorus subsp. calycinus ms

Eucalyptus dissimulata
Eucalyptus aff. astringens
Eucalyptus aff. latens
Eucalyptus aff. perangusta
Eucalyptus albida
Eucalyptus angustissima
Eucalyptus arachnaea subsp. arachnaea
Eucalyptus argyphea
Eucalyptus astringens subsp. astringens
Eucalyptus captiosa
Eucalyptus conglobata
Eucalyptus decipiens subsp. adesmophloia
Eucalyptus densa subsp. densa
Eucalyptus falcata
Eucalyptus flocktoniae
Eucalyptus gardneri subsp. gardneri
Eucalyptus horistes
Eucalyptus hypochlamydea subsp. ecdysiastes ms
Eucalyptus incrassata
Eucalyptus kochii subsp. kochii
Eucalyptus kochii subsp. plenissima
Eucalyptus latens P4
Eucalyptus leptophylla
Eucalyptus longicornis
Eucalyptus loxophleba
Eucalyptus loxophleba subsp. gratiae
Eucalyptus loxophleba subsp. loxophleba
Eucalyptus loxophleba x wandoo P1
Eucalyptus macrocarpa subsp. macrocarpa
Eucalyptus myriadena subsp. myriadena
Eucalyptus occidentalis
Eucalyptus olivacea ms R
Eucalyptus pachyloma
Eucalyptus phaenophylla subsp. phaenophylla
Eucalyptus phenax
Eucalyptus pluricaulis subsp. pluricaulis
Eucalyptus pluricaulis subsp. porphyrea
Eucalyptus rudis
Eucalyptus salmonophloia
Eucalyptus sargentii
Eucalyptus spathulata
Eucalyptus spathulata subsp. grandiflora
Eucalyptus transcontinentalis
Eucalyptus uncinata
Eucalyptus xanthonema subsp. xanthonema
Exocarpos sparteus

Frankenia brachyphylla P2
Frankenia pulverulenta

Gastrolobium bilobum
Gastrolobium calycinum
Gastrolobium crassifolium
Gastrolobium parviflorum
Gastrolobium pusillum
Gastrolobium rotundifolium P1
Gastrolobium spinosum var. spinosum
Gastrolobium trilobum
Gastrolobium truncatum
Gilberta tenuifolia
Gilruthia osbornei
Gnephosis tenuissima
Gonocarpus nodulosus
Goodenia berardiana
Goodenia pulchella
Grevillea hookeriana
Grevillea huegelii
Grevillea leptobotrys
Grevillea pilulifera
Grevillea tenuiflora
Grevillea uncinulata subsp. uncinulata
**Gynandriris setifolia* (Thread Iris)

Haemodorum discolor
Haemodorum simulans
Hakea cygna
Hakea incrassata
Hakea laurina
Hakea pandanicarpa
Hakea prostrata
Hakea varia
Halgania anagalloides var. anagalloides ms
Halgania anagalloides var. preissiana ms
Halosarcia lepidosperma
Halosarcia pergranulata subsp. pergranulata
Halosarcia syncarpa
Helichrysum leucopsideum
Heliotropium europaeum
Hemiandra pungens
Hemigenia podalyrina
Hibbertia commutata
Hibbertia enervia
Hibbertia microphylla
Hibbertia recurvifolia
Hibbertia rupicola
Hibbertia spicata
**Homeria flaccida* (One-leaf Cape Tulip)
Hovea pungens
Hyalochlamys globifera
Hybanthus floribundus subsp. floribundus
Hypocalymma angustifolium
Hypolaena exsulca

Isolepis nodosa
Isolepis setiformis
Isopogon buxifolius var. spathulatus
Isopogon teretifolius subsp. teretifolius ms
Isotoma hypocrateriformis

Jacksonia sternbergiana
**Juncus acutus* (Spiny Rush)
Juncus pallidus

Juncus radula
Juncus subsecundus

Kunzea pulchella

Lambertia ilicifolia
Lambertia inermis var. drummondii
Lasiopetalum cardiophyllum P2
Latrobea tenella
Laxmannia ramosa subsp. ramosa
Laxmannia sessiliflora subsp. australis
Laxmannia squarrosa
Lechenaultia formosa
Lechenaultia pulvinaris R
Lechenaultia tubiflora
Lepidium rotundum
Lepidobolus preissianus
Lepidosperma brunonianum
Lepidosperma costale
Lepidosperma gracile
Lepidosperma longitudinale
Lepidosperma tenue
Lepidosperma tuberculatum
Lepilaena australis
Leptomeria pauciflora
Leptospermum erubescens
Lepyrodia glauca
Leucopogon cymbiformis
Leucopogon fimbriatus
Leucopogon minutifolius
Leucopogon obtusatus
Leucopogon polymorphus
Leucopogon sprengelioides
Levenhookia pusilla
**Limonium sinuatum* (Perennial Sea Lavender)
Linum marginale
Lobelia alata
Lobelia rhombifolia
Lomandra rupestris
Lomandra suaveolens
Lyginia barbata

**Medicago polymorpha* (Burr Medic)
Melaleuca acuminata subsp. acuminata ms
Melaleuca adenostyla
Melaleuca calycina subsp. calycina
Melaleuca halmaturorum
Melaleuca haplantha
Melaleuca pungens
Melaleuca strobophylla
Melaleuca subtrigona
Melaleuca uncinata
Melaleuca urceolaris
Melaleuca viminea subsp. viminea
Microcorys exserta
Microcorys subcanescens
Microtis alba
Microtis orbicularis
Millotia tenuifolia var. tenuifolia
Mirbelia subcordata

Nemcia carinata
Nemcia hookeri
Nemcia punctata
Nemcia stipularis P4
Nemcia tricuspidata
Neurachne alopecuroidea

Olax benthamiana
Osteospermum clandestinum
Oxalis bowiei
Oxalis corniculata
Oxalis glabra
Oxalis purpurea
Ozothamnus lepidophyllus

Patersonia occidentalis
Pelargonium havlasae
Pelargonium littorale subsp. littorale
Persoonia saundersiana
Petrophile aspera
Petrophile divaricata
Petrophile ericifolia subsp. ericifolia ms
Petrophile glauca ms
Petrophile heterophylla
Petrophile longifolia
Petrophile media
Petrophile seminuda
Petrophile serruriae
Petrophile squamata subsp. squamata
Petrophile striata
Phebalium tuberculosum
**Phyllopodium cordatum*
Phyllota gracilis P3
Pimelea angustifolia
Pimelea argentea
Pimelea ciliata subsp. ciliata
Podolepis canescens
Podolepis capillaris
Podolepis gracilis
Podolepis lessonii
Pomaderris bilocularis P4
Poranthera ericoides
Potamogeton drummondii
Praecoxanthus aphyllus ms
Prasophyllum cyphochilum
Prasophyllum gracile
Prasophyllum hians
Prasophyllum sargentii
Prostanthera campbellii
**Pseudognaphalium luteo-album* (Jersey Cudweed)

Pterochaeta paniculata
Pterostylis hamiltonii
Pterostylis sargentii
Pterostylis vittata
Ptilotus manglesii
Ptilotus polystachyus var. polystachyus
Ptilotus spathulatus forma spathulatus
**Puccinellia ciliata* (Puccinellia)
Pultenaea strobilifera

Quinetia urvillei

**Raphanus raphanistrum* (Wild Radish)
Regelia inops
**Reseda luteola* (Wild Mingonette)
Rhodanthe citrina
Rhodanthe manglesii
Rhodanthe pygmaea
Ruppia megacarpa

Sarcocornia blackiana
Sarcocornia quinqueflora
Scaevola aff. sericophylla
Scaevola lanceolata
Scaevola pulvinaris
Schoenia ayersii
Schoenus pleiostemoneus
Schoenus sp.smooth culms (K.R.Newbey 7823)
Schoenus subflavus subsp. subflavus
Sebaea ovata
Senecio gregorii
**Silene vulgaris* (Bladder Campion)
**Solanum hoplopetalum* (Thorny Solanum)
Solanum rostratum
**Soliva pterosperma*
Sollya heterophylla
**Sonchus asper subsp. glaucescens*
Sphaerolobium drummondii
Sphaerolobium medium
Spiculaea ciliata
Stackhousia monogyna
Stackhousia scoparia
Stenanthemum tridentatum P3
Stirlingia simplex
Stylidium affine
Stylidium caricifolium
Stylidium emarginatum subsp. emarginatum
Stylidium expeditionis P4
Stylidium guttatum
Stylidium lepidum P3
Stylidium leptophyllum
Stylidium piliferum
Stylidium spathulatum subsp. glandulosum
Stylidium squamellosum
Stylobasium spathulatum
Styphelia tenuiflora
Synaphea drummondii P3
Synaphea platyphylla P2

**Tagetes minuta* (Stinking Roger)
Templetonia aculeata
Templetonia sulcata
Teucrium fililobum
Thelymitra antennifera
Thelymitra crinita
Thelymitra nuda
Thelymitra villosa
Thelymitra x macmillanii
Thomasia macrocalyx
Thryptomene australis
Thysanotus acerosifolius P1
Thysanotus dichotomus
Thysanotus tenuis P3
Tricoryne elatior
**Trifolium hirtum* (Rose Clover)
**Trifolium subterraneum* (Subterranean Clover)
Triglochin lineare
Triglochin mucronatum
Triglochin stowardii P2
Trymalium ledifolium var. rosmarinifolium

Urodon dasyphyllus
**Ursinia anthemoides* (Ursinia)
**Urtica urens* (Small Nettle)

Velleia trinervis
Verreauxia reinwardtii
Verticordia acerosa var. preissii
Verticordia chrysanthella
Verticordia densiflora var. densiflora
Verticordia endlicheriana var. endlicheriana
Verticordia grandiflora
Verticordia habrantha
Verticordia insignis subsp. compta
Verticordia lindleyi subsp. purpurea P4
Verticordia ovalifolia
Verticordia pennigera
Verticordia plumosa
Verticordia plumosa var. brachyphylla
Verticordia serrata var. serrata
**Vicia sativa subsp. nigra*
Villarsia capitata
**Vulpia myuros* (Rat's Tail Fescue)

Wahlenbergia preissii
Waitzia acuminata var. acuminata
Wilsonia humilis

Xanthorrhoea brevistyla P4
Xanthorrhoea drummondii

Appendix

5

APPENDIX 5

Fauna species in the Shire of Wagin (Source- W.A Museum, 2005)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates -33.0333, 117.0833 and -33.5166, 117.7000.

Note- not a comprehensive list.

* represents an introduced species.

BIRD SPECIES		
Acanthizidae		
Gerygone fusca	Western Gerygone	
Accipitridae		
Aquila audax	Wedge-tailed Eagle	
Elanus caeruleus axillaris	Australian Black-shouldered Kite	
Anatidae		
Chenonetta jubata	Australian Wood Duck (Wood Duck)	
Charadriidae		
Charadrius rubricollis	Hooded Plover	Rare
Charadrius ruficapillus	Red-capped Plover	
Climacteridae		
Climacteris rufa	Rufous Treecreeper	
Columbidae		
Streptopelia senegalensis senegalensis	Laughing Turtle-Dove	
Dicruridae		
Rhipidura fuliginosa	Grey Fantail	
Falconidae		
Falco longipennis longipennis	Australian Hobby	
Falco peregrinus	Peregrine Falcon	
Halcyonidae		
Dacelo novaeguineae	Laughing Kookaburra	
Maluridae		
Stipiturus malachurus westernensis	Southern Emu-wren	
Meliphagidae		
Epthianura albifrons	White-fronted Chat	
Phylidonyris melanops	Tawny-crowned Honeyeater	
Pachycephalidae		
Falcunculus frontatus	Crested Shrike-tit	
Pardalotidae		
Pardalotus punctatus punctatus	Spotted Pardalote	
Pardalotus striatus	Striated Pardalote	
Petroicidae		
Microeca fascinans assimilis	Jacky Winter	
Podargidae		
Podargus strigoides	Tawny Frogmouth	

Pomatostomidae		
Pomatostomus superciliosus	White-browed Babbler	Rare
Psittacidae		
Calyptohynchus latirostris	Carnaby's Black Cockatoo	Endangered
Neophema elegans	Elegant Parrot	
Platycercus icterotis icterotis	Western Rosella	
Platycercus icterotis xanthogenys	Western Rosella (inland spp)	Rare
Platycercus spurius	Red-capped Parrot	
Platycercus zonarius	Ringneck "28" Parrot	
Polytelis anthopeplus anthopeplus	Regent Parrot	
Rallidae		
Porzana fluminea	Australian Spotted Crake	
Scolopacidae		
Tringa glareola	Wood Sandpiper	
Strigidae		
Ninox connivens	Barking Owl	
Ninox novaeseelandiae	Boobook Owl	
Ninox novaeseelandiae boobook	Boobook Owl	
Turnicidae		
Turnix varia varia	Painted Button-quail	
Tytonidae		
Tyto alba	Barn Owl	
Tyto alba delicatula	Barn Owl	
Zosteropidae		
Zosterops lateralis gouldi	Grey-breasted White-eye (Silvereye)	

MAMMAL SPECIES

Bovidae		
**Ovis aries*	Sheep	
Burramyidae		
Cercartetus concinnus	Western Pygmy-possum, Mundarda	
Dasyuridae		
Dasyurus geoffroii	Chuditch	Rare
Phascogale calura	Red-tailed Phascogale	Rare
Phascogale tapoatafa tapoatafa	Southern Brush-tailed Phascogale, Wambenger	
Sminthopsis crassicaudata	Fat-tailed Dunnart	
Sminthopsis granulipes	White-tailed Dunnart	
Leporidae		
**Oryctolagus cuniculus*	Rabbit	
Macropodidae		
Macropus eugenii derbianus	Tammar Wallaby	Rare
Macropus fuliginosus	Western Grey Kangaroo	
Macropus irma	Western Brush Wallaby	Rare
Muridae		
**Mus musculus*	House Mouse	
Myrmecobiidae		

Myrmecobius fasciatus	Numbat, Walpurti	Threatened
Peramelidae		
Isoodon obesulus fusciventer	Southern Brown Bandicoot, Quenda	Rare
Phalangeridae		
Trichosurus vulpecula vulpecula	Common Brushtail Possum	
Tarsipedidae		
Tarsipes rostratus	Honey Possum, Noolbenger	
Thylacomyidae		
Macrotis lagotis	Bilby, Dalgyte	Threatened
Vespertilionidae		
Chalinolobus gouldii	Gould's Wattled Bat	
Vespadelus regulus	Southern Forest Bat	

REPTILE SPECIES

Agamidae		
Ctenophorus maculatus griseus	Spotted Sand Dragon	
Ctenophorus ornatus	Ornate Crevice Dragon	
Pogona minor	Dwarf Bearded Dragon	
Pogona minor minor	Western Bearded Dragon	
Boidae		
Morelia spilota imbricata	Carpet Python	Rare
Elapidae		
Echiopsis curta	Bardick	
Elapognathus coronatus	Crowned Snake	
Notechis scutatus	Tiger Snake	
Parasuta gouldii	Gould's Hooded Snake	
Parasuta nigriceps	Black-backed Snake	
Pseudonaja affinis affinis	Dugite	
Simoselaps bertholdi	Jan's Banded Snake	
Gekkonidae		
Christinus marmoratus	Southern Australian Gekkonid Lizard	
Crenadactylus ocellatus	Clawless Gecko	
Crenadactylus ocellatus ocellatus	Clawless Gecko	
Diplodactylus alboguttatus	White-spotted Ground Gecko	
Diplodactylus granariensis	Wheatbelt Stone Gecko	
Diplodactylus maini	Main's Ground Gecko	
Diplodactylus spinigerus	Western Spiny-tailed Gecko	
Oedura reticulata	Reticulated Velvet Gecko	
Strophurus spinigerus	South-western Spiny-tailed Gecko	
Underwoodisaurus milii	Thick-tailed Gecko	
Pygopodidae		
Delma australis	Marble-faced Delma	Endangered
Delma fraseri fraseri	Fraser's Delma	
Lialis burtonis	Burton's Snake-lizard	
Pygopus lepidopodus	Common Scaly Foot	
Scincidae		
Cryptoblepharus plagiocephalus	Speckled Skink	
Ctenotus impar	Southwest Odd-striped Ctenotus	
Hemiergis peronii peronii	Burrowing Skink	
Lerista distinguenda	Dwarf Four-toed Slider	

Menetia greyii	Common Dwarf Skink
Morethia obscura	Woodland Flecked Skink
Tiliqua occipitalis	Western Blue-tongue Lizard
Tiliqua rugosa rugosa	Bobtail

Typhlopidae

Ramphotyphlops australis	Southern Blind Snake
Ramphotyphlops bituberculatus	Prong-snouted Blind Snake
Ramphotyphlops pinguis	Fat Blind Snake

Varanidae

Varanus gouldii	Gould's Goanna, Sand Monitor
Varanus tristis tristis	Black-tailed Monitor

AMPHIBIA SPECIES

Hylidae

Litoria adelaidensis	Slender Tree Frog
Litoria moorei	Motorbike Frog or Bell Frog

Myobatrachidae

Crinia georgiana	Quacking Frog
Crinia pseudinsignifera	Bleating Froglet
Heleioporus albopunctatus	Western Spotted Frog
Limnodynastes dorsalis	Bullfrog or Banjo Frog
Myobatrachus gouldii	Turtle Frog
Neobatrachus kunapalari	Kunapalari Frog
Neobatrachus pelobatoides	Humming Frog
Pseudophryne guentheri	Gunther's Toadlet / Crawling Frog

FISH SPECIES

Galaxiidae

Galaxias occidentalis	Western Galaxias

Nannopercidae

Edelia vittata	Western Pygmy Perch

Percichthyidae

Bostockia porosa	Nightfish

Appendix

6

ROADSIDE CONSERVATION COMMITTEE

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

Preamble

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

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

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

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

Legislation

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

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

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

Scientific or Other Prescribed Purposes Licences where the protected flora is being taken for specific non-commercial purposes.
These licences are issued by CALM. In issuing a licence, CALM is required to be assured that the activity will not compromise the conservation of the flora. In determining this, CALM will seek advice from the land manager for which the application relates to determine the potential impact of the activity, and how the activity relates to the management objectives being applied to that land.

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

Commercial Wildflower Harvesting

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

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

Wildflower harvesting in many instances detracts from the biodiversity and tourism values of the roadside. It is often the case that flora is harvested from roadsides because of the convenience of access, and harvesters should be directed to find alternative locations.
There are situations where some harvesting may be considered, such as in very wide road reserves where the activity can be screened from road users, but mostly road managers have been discouraged from supporting or allowing such harvesting to occur. If harvesting is to be approved, then the points provided at the end of these guidelines should be considered.

Seed Collection

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

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

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

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

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

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

Timber Harvesting from Roadsides.

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

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

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

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

Guidelines For Harvesting On Roadsides

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

- ✓ Any flora removed should not affect the viability of the residual seed bank. It is recommended that no more than 20% of the flowers or seed on a plant should be taken, unless it is in an area that is scheduled to be cleared as part of road management.
- ✓ Methods of harvesting flora should not jeopardise the survival of the plant/tree, unless it is in an area that is scheduled to be cleared as part of road management.
- ✓ The removal of whole plants should be restricted to areas that are scheduled to be cleared as part of road management. Note, some species of flora such as zamia palms and grass trees cannot be removed for commercial purposes without a special endorsement on the Commercial Purposes Licence issued by CALM.
- ✓ No flora of special conservation concern (Declared Rare Flora or Priority Flora) should be removed without special authorisation through CALM.
- ✓ No commercial harvesting of any plant product should be allowed for any reason between the markers that delineate a 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

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 of 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

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

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

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

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

Tourism Implications

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

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

Flora Road Register

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

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