Roadside Vegetation and Conservation Values in the Shire of Westonia



Photo by Sara Bright

August 2007

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

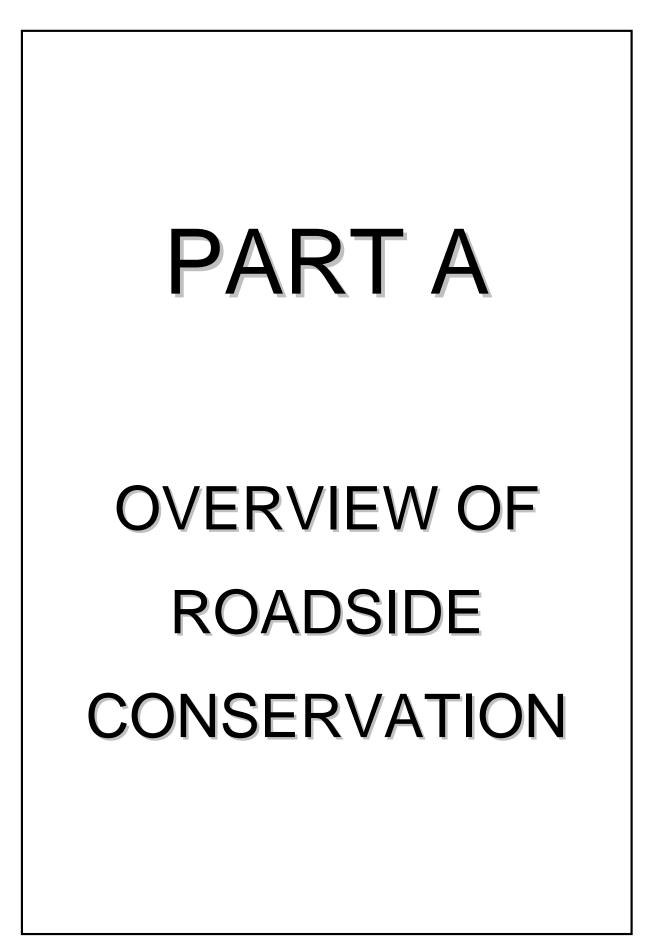
Aware of the need to conserve roadside remnants, the Shire of Westonia and the Natural Resource Management Officer liaised with the Roadside Conservation Committee (RCC) in 2004 to survey roadsides in their Shire. Surveys to assess the conservation values of roadside remnants were conducted between October and November 2006. The majority, 96.7%, of the Shire's 857.6 km of roadsides were assessed by the RCC for their conservation status and maps were produced via a Geographic Information System (GIS). Roadside locations of six nominated weeds and habitat trees were also recorded and mapped onto separate clear overlays.

The results of the survey indicated that high conservation value roadsides covered 58.4% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 28.8%. Medium-low and low conservation value roadsides occupied 6.4% each. 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 the Shire and community groups as a management and planning tool. Applications may range from prioritising work programs to formulating management strategies. Past experience has shown that this document and the accompanying maps are valuable in assisting with:

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

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 Westonia to utilise the RCV map in many facets of its Landcare, tourism, road maintenance operations and Natural Resource Management (NRM) strategy documents. In addition, the RCC is available to provide assistance with the development of roadside vegetation management plans and associated documents.



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



The False Western Froglet (*Crinia pseudinsignifera*) has been recorded in the Shire of Westonia.

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

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

Other important values of transport corridor remnants are that they:

- are often the only remaining example of original vegetation within extensively cleared areas;
- often contain rare and endangered plants and animals. Currently, roadside plants represent more than 50% of the known populations of Declared Rare Flora (DRF) and three species are known only to exist in roadside populations;
- provide the basis for our important wildflower tourism industry. The aesthetic appeal of well-maintained roadsides should not be overlooked, and they have the potential to improve local tourism and provide a sense of place;
- often contain sites of Aboriginal/European historic or cultural significance;
- provide windbreaks and stock shelter areas for adjoining farmland by helping to stabilise temperature and reduce evaporation;



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

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

2.0 What are the Threats?

2.1 Lack of Awareness

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

2.2 Roadside Clearing

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

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

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

2.3 Fire

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

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

The RCC's policy on fire management is:

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

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

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



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

2.4 Weeds

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

Once weeds become established in an area, they become a longterm management issue, costing considerable resources to control or eradicate. The WA Herbarium records 29 weed species in the Shire of Westonia (Appendix 4). The roadside survey recorded populations of six significant weeds, and their locations were mapped by the RCC onto clear overlays. The six nominated weeds were:

- Fountain Grass (Pennisetum setaceum);
- Onion Weed (Asphodelus fistulosus);
- Paterson's Curse (Echium plantagineum);
- Saffron Thistle (Carthamus lanatus);
- Wild Oats, Wild Radish and/or Capeweed (Avena fatua, Raphanus raphanistrum, Arctotheca calendula); and
- African Lovegrass (*Eragrostis curvula*).



Fountain Grass is a highly invasive weed that forms dense stands. It out-competes and suppresses native plants, greatly increasing fire risk and intensity.

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

Roadside populations of these weeds can be observed on the weed overlays provided with the Westonia RCV map (2007). 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.



Asphodelus fistulosus Photos: M. Kealley, S.J. Patrick & K.C. Richardson Onion Weed is a weed of rangelands and pasture, and heavy infestations are a symptom of excessive grazing pressure. It is unpalatable, with high seed production.

Photography by M. Kealley, S.J. Patrick & K.C. Richardson. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse



Eragrostis curvula Photos: J. Dodd, L. Fontanini & R. Randal African Lovegrass is a perennial herb with an invasive habit. It out-competes and suppresses native plants and creates a greatly increased fire risk.

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

2.5 Salinity

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

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

Based on figures supplied by the Department of Agriculture WA for the Salinity Investment Framework Interim Report (2003), Table 1 shows that in 2003, approximately 1.95% of the 877.07 km of roads assessed, or 17.10km, in the Shire of Westonia were affected by salinity (Table 1). Over half of these, 12.03 km, are local roads managed by the Shire.

Shire	Total road	Roads potentially affected by salinity - length in km						
	length assessed (km)	Highways	Local roads	Main roads	Other roads	Total affected	% of total potentially affected	
Mukinbudin	878.51		1.28		2.7	3.98	0.45	
Nungarin	491.25		20.48	0.53	5.90	26.90	5.48	
Westonia	877.07	1.78	12.03		3.30	17.10	1.95	
Merriden	1,230.83	4.08	41.30	0.60	10.90	56.88	4.62	
Yilgarn	2,056.67	2.13	23.55		7.50	33.18	1.61	

Table 1. Road lengths potentially affected by salinity in the Shires of Mukinbudin, Nungarin, Westonia,
Merriden and Yilgarn.

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

3.0 Legislative Requirements

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

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

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

State legislation:

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

Commonwealth legislation:

- Environment Protection and Biodiversity Conservation Act 1999

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

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

This assessment process is designed to provide a more comprehensive and stringent land clearing control system. There are two land clearing permits available: an area permit; and a purpose permit. For example, where clearing is for a once-off clearing event such as pasture clearing or an agricultural development, an area permit is required. Where ongoing clearing is necessary for a specific purpose, such as road widening programs, a purpose permit is needed. Shire road maintenance activities are exempt, to the width and height previously legally cleared for that purpose within the last 10 years (refer to Schedule 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations* 2004).

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

4.0 Environmentally Sensitive Areas

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

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

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

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

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



Roadside ESA markers are highly visible. Photo by C. Wilson

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

5.0 Flora Roads

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



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

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

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

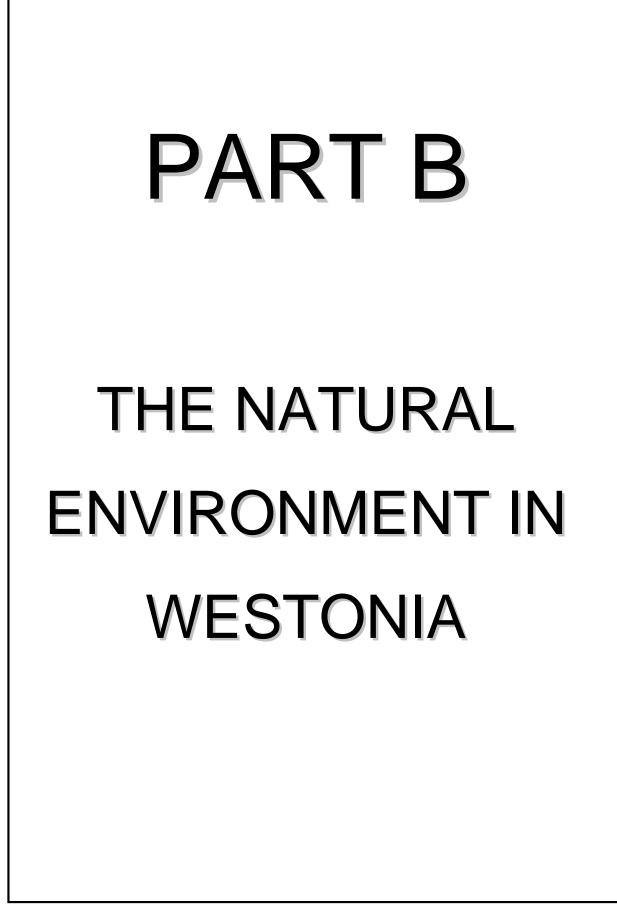
Attractive roadsides are an important focus in Western Australia, the "Wildflower State". Flora Roads will by

their very nature be attractive to tourists and would often be suitable as part of a tourist drive network. Consideration should be given to:

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

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





1.0 Flora

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

The WA Herbarium lists 830 species of plants present in the Shire of Westonia. The most prolific genera are *Acacia* (64 spp), *Eucalyptus* (51 spp), *Melaleuca* (22 spp), *Grevillea* (22 spp), *Eremophila* (20 spp), and *Hibbertia* (13 spp). The complete list of recorded flora can bee seen in Appendix 4 of this report.



Grevillea squiresiae is a Priority 1 flora that occurs in the Shire of Westonia. Photography by K. Bettink. Photo used with the permission of the WA Herbarium, DEC 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 (ESAs) and should be delineated by yellow stakes with an identification plate attached. The RCC suggests using the publication *Guidelines for Managing Special Environmental Areas in Transport Corridors* as a guideline for managing these sites. It is the responsibility of the road manager to ensure these markers are installed, and guides for this are available from the RCC. For information regarding DRF, contact the Department of Environment and Conservation (DEC) Flora Officer for the Merredin District. If roadworks are to be carried out near DRF sites, it is advisable to contact DEC at least six weeks in advance.

Currently (as at July 2007), 27 locations of Declared Rare Flora are known to occur within roadsides in the Shire of Westonia. All of these sites occur in roadsides vested in the Shire of Westonia. In total, there are four species of Declared Rare Flora (DRF) that occur in these roadside locations, these are:

- Eremophila resinosa;
- Eremophila virens;
- Eremophila viscida; and
- Eucalyptus brevipes.



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



Resinous Eremophila (*Eremophila* resinosa) is declared rare. A small spreading shrub to 60cm high, it flowers from September to February.

Photography by A.P. Brown & L. Sweedman. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse



Campion Eremophila (*Eremophila virens*) has been declared rare. It is an erect, slender shrub to 5m high, which flowers from August to October.

Photo by A.P. Brown & S.D. Hopper. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse



Declared rare flora Varnish Bush (Eremophila viscida). A shrub to 4m high, it flowers from September to November.

Photography by S.F. Patrick & A.P. Brown. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse



Declared rare Mukinbudin Mallee (*Eucalyptus* brevipes). Up to 6m high, this mallee has a rough bark and produces white to cream flowers during October.

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

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

3.0 Fauna

The Western Australian Museum records approximately 74 species of fauna from the Westonia area (Appendix 5). WA Museum fauna records comprise specimen records, museum collections and observations from 1850 to present and therefore it is intended to act only as a general representation of the fauna in the area. Of the fauna species recorded in the Westonia area, there were 15 bird, 4 amphibia, 14 mammal and 41 reptile species.

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

The *Wildlife Conservation Act* 1950 provides for native fauna (and flora) to be specially protected where they are under identifiable threat of extinction, and as such, are considered to be "threatened". Based on distributional data from the Department of Environment and Conservation (DEC), 5 species of threatened and priority fauna have been recorded or sighted throughout the Shire of Westonia, and these are listed below.

• Bilby (Macrotis lagotis)

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

• Malleefowl (Leipoa ocellata)

This species was once widely distributed across southern Australia. It prefers woodland or shrubland with an abundant litter layer that provides essential material for the construction of its nest mound.

Daphnia jollyi

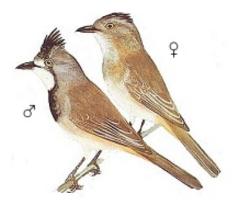
This species of aquatic invertebrate has been found in rock pools on granites.

Crested Bellbird (southern) (Oreoica gutturalis gutturalis)

This sedentary and solitary species inhabits the drier mallee woodlands and heaths of the southern parts of the State.

White-browed Babbler (western wheatbelt) (Pomatostomus superciliosus ashbyi)

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



The Southern Crested Bellbird can be found in the Shire of Westonia.

Drawing by M. Thompson. Picture used with the permission of the WA Museum, FaunaBase http://www.museum.wa.gov.au/faunabase/prod/index.htm.

4.0 Remnant Vegetation Cover

Only 21.5% of the original native vegetation within the clearing line remains in the Shire of Westonia 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. Westonia has less than 22% remaining, and the remaining vegetation can easily be further depleted if proactive measures are not taken to manage this priceless resource.

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

Shire	Total Area (ha)	Area inside Clearing Line (ha)	Vegetation Cover Remaining (inside clearin line)	
			(ha)	(%)
Mukinbudin	342,575	278,129	39,021	14.0
Nungarin	117,004	117,004	17,827	15.2
Westonia	329,601	269,088	57,813	21.5
Merredin	326,610	326,610	38,551	11.8
Yilgarn	3,067,793	727,272	171,915	23.6

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



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



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

PART C ROADSIDE SURVEYS IN THE SHIRE OF WESTONIA

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 (829.0 km, or 96.7%) of the Shire of Westonia's 857.6 km of roads were surveyed and then assessed to determine the conservation status of the road reserves. Fieldwork was carried out throughout the months of October and November 2006. The enthusiastic efforts of the Natural Resouce Management Facilitator Pauline Guest and the Natural Resource Management Trainee Sara Bright ensured that this project was successfully completed. All 829.0 km of roads were surveyed by Pauline Guest and Sara Bright.

1.1 Methods

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

The methods to assess and calculate the conservation value of the roadside reserves are described in *Assessing Roadsides: A Guide for Rating Conservation Value* (Jackson, 2002). The process involves scoring a set of pre-selected attributes, which when combined, represent a roadside's conservation status. A list of these attributes is presented on a standard survey sheet (Appendix 1) (Please note that the RCC no longer uses these survey sheets). 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;
- level of weed infestation;
- extent of native vegetation along roadside;
- value as a biological corridor; and

number of native species;

predominant adjoining land use.

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

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

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

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

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

1.2 Mapping Roadside Conservation Values

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

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

1.3 Roadside Conservation Value Categories

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

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



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

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

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



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

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

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

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

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



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



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

2.0 USING THE ROADSIDE CONSERVATION VALUE MAP (RCV MAP)

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

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

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



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

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

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



Weed control along a roadside. Photo MRWA



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



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



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

3.0 RESULTS

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

Length			8.0 km (829.0 km of	iuuj	
Roadside Conservation Status Roadside Conservation Values					
	Total (km)	(%)	Score	Total (km)	(%
High (9-12)	968.0	58.4	0	0.0	0.0
Medium-high (7-8)	477.8	28.8	1	4.0	0.2
Medium-low (5-6)	106.8	6.4	2	25.3	1.
Low (0-4)	105.4	6.4	3	32.0	1.
			4	44.1	2.
Total	1658.0	100.0	5	28.5	1.
			6	78.3	4.
Native Vegetation			7	230.6	13.
	Total (km)	(%)	8	247.2	14.
2-3 vegetation layers	1556.6	93.9	9	260.1	15.
1 vegetation layer	79.3	4.8	10	345.3	20.
0 vegetation layers	22.2	1.3	11	268.3	16.
			12	94.3	5.
Total	1658.0	100.0			
	-		Total	1658.0	100.
Number of Native					
	Total (km)	(%)	Width of Veg		
Over 20 species	798.8	48.2		Total (km)	(%
6 to 19 species	702.4	42.4	1 to 5 m	880.3	53.
0 to 5 species	156.8	9.5	5 to 20 m	551.9	33.
Total	4050.0	100.0	Over 20 m	18.4	1.
TOTAL	1658.0	100.0	Unknown	207.4	12.
Predominant Adjo	ining Land L	<u>Jse</u>	Total	1658.0	100.
	Total (km)	(%)			
Completely Cleared	931.1	56.2	Extent of N	ative Vegeta	tion
Scattered Trees/Shrubs	460.0	27.7		Total (km)	(%
Uncleared Land	236.9	14.3	Over 80%	726.9	43.
Plantation	0.0	0.0	20% to 80%	791.1	47.
Urban or Industrial	1.5	0.1	Less than 20%	140.0	8.
Railway Reserve	26.2	1.6			
Drain Reserve	2.4	0.1	Total	1658.0	100.
Other	0.0	0.0			
			<u>Value as a B</u>		
Total	1658.0	100.0		Total (km)	(%
			High	536.5	32.
Weed Infe			Medium	694.2	41.
	Total (km)	(%)	Low	427.3	25.
Light <20% weeds	1019.9	61.5			
Medium 20-80% weeds	521.8	31.5	Total	1658.0	100.
Heavy >80% weeds	116.3	7.0			
Total	1658.0	100.0			

Table 3. Summary of results of roadside survey undertaken in the Shire of Westonia

Width of Road Reserve

The width of road reserves in the Shire of Westonia was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 568.0km (68.5%) of roads falling into this category. The remaining 261.0km (31.5%) were 40 metres in width.

Width of Vegetated Road Reserve

The width of vegetated roadside was recorded by selecting one of four categories: 1-5 metres; 5-20 metres; over 20 metres in width; or unknown. The left and right hand sides were recorded independently, and then combined to establish the total figures (Table 5). The majority of roadside vegetation, 880.2m (53.1%), was between 1 to 5 metres in width, followed by 551.9km (33.3%) where the width of vegetation was between 5 and 20 metres in width. 207.4km (12.5%) of vegetated road reserve had an unknown width, and 18.4km (1.1%) recorded a width of over 20 metres.

Width of Road Reserve					
km	%				
568.0	68.5				
261.0	31.5				
829.0	100.0				
	km 568.0 261.0				

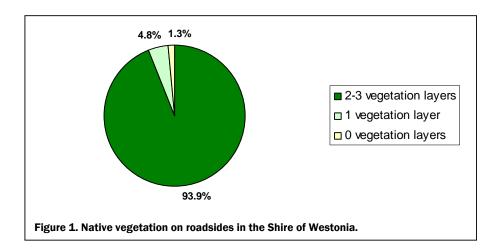
Table 4. Width of road reserves inthe Shire of Westonia.

Width of Vegetated Rd Reserve					
	total km	%			
1-5m	880.2	53.1			
5-20m	551.9	33.3			
>20m	18.4	1.1			
Unknown	207.4	12.5			
Total	1658.0	100.0			

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

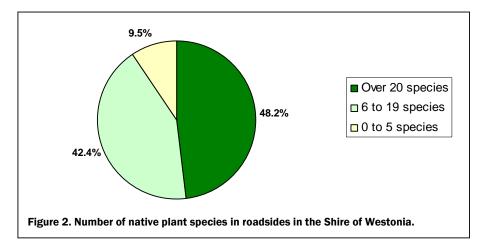
Native Vegetation on Roadsides

The number of native vegetation layers present, i.e. tree, shrub and/or ground layers, determined the 'native vegetation on roadside' value. Sections with two to three layers of native vegetation covered 93.9% of roadsides (1556.6km), 4.8% (79.3km) of roadsides had only one layer and 1.3% (22.2km) had no layers of native vegetation (Table 3 and Figure 1).



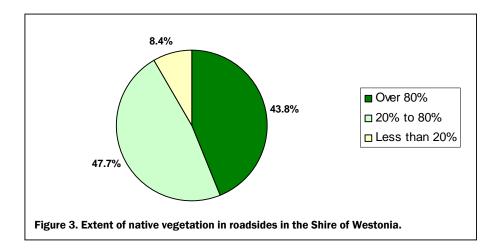
Number of Native Plant Species

The 'number of native plant species' score provided a measure of the diversity of the roadside vegetation. Survey sections with over 20 plant species spanned 48.2% (798.8km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 42.4% (702.4km) of the roadside. The remaining 9.5% (156.8km) contained less than 5 plant species (Table 3 and Figure 2).



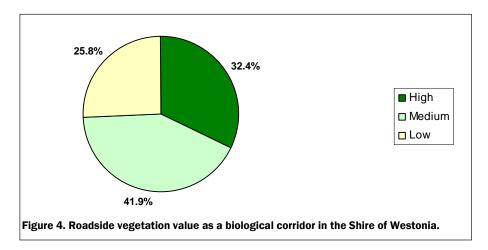
Extent of Native Vegetation

The 'extent of native vegetation' cover refers to the continuity of the roadside vegetation and takes into account the presence of disturbances such as weeds. Roadsides with extensive vegetation cover, i.e. greater than 80%, occurred along 43.8% (726.9km) of the roadsides surveyed. Survey sections with medium vegetation cover, i.e. 20% to 80%, accounted for 47.7% (791.1km) of the roadsides. The remaining 8.4% (140.0km) had less than 20% native vegetation and therefore a low 'extent of native vegetation' value (Table 3 and Figure 3).



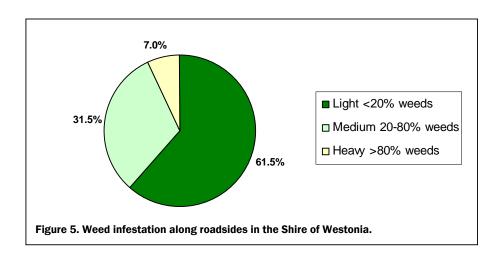
Value as a Biological Corridor

This characteristic considered the presence of four attributes: connection of uncleared areas; presence of flowering shrubs; presence of large trees with hollows; and presence of hollow logs. Roadsides determined to have high value as a biological corridor were present along 32.4% (536.5km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 41.9% (694.2km), and roadsides with low value as a biological corridor occurred along 25.8% (427.3km) of the roadsides surveyed (Table 3 and Figure 4).



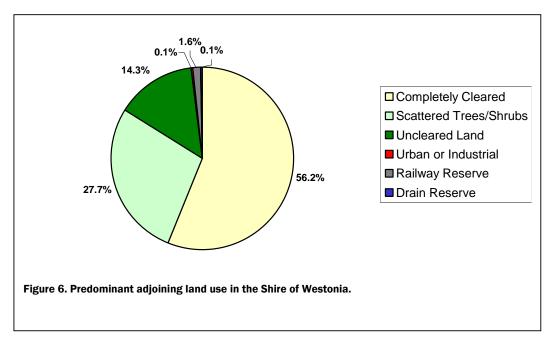
Weed Infestation

Light levels of weed infestation (weeds comprising less than 20% of total plants), were recorded on 61.5% (1019.9km) of the roadsides surveyed, medium level weed infestation (weeds comprising 20-80% of the total plants) occurred on 31.5% (521.8km) of the roadsides and 7.0% of roadsides (116.3km) were heavily infested with weeds (weeds comprising more than 80% of the total plants) (Table 3 and Figure 5).



Predominant Adjoining Land Use

Uncleared native vegetation was present on 14.3% (236.9km) of the land adjoining roadsides, whilst 56.2% (931.1km) of roadsides adjoined land that had been completely cleared for agriculture. Land cleared for agriculture, but still containing a scattered distribution of native vegetation comprised 27.7% (460.0km) of the roadsides. Railway reserves adjoined 1.6% (26.2km) of the roadsides, drains were found along 0.1% (2.4km) of roadsides and urban or industrial land uses adjoined 0.1% (1.5km)(Table 3 and Figure 6).



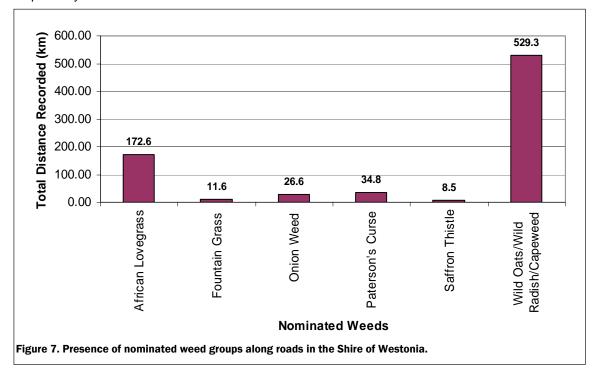
Nominated Weeds

The following weeds are depicted on clear overlays accompanying the 2007 Roadside Conservation Value map:

- African Lovegrass (Eragrostis curvula);
- Fountain Grass (Pennisetum setaceum);
- Onion Weed (Asphodelus fistulosus);
- Paterson's Curse (Echium plantagineum);
- Saffron Thistle (Carthamus lanatus); and
- Wild Oats / Wild Radish / Capeweed (Avena fatua / Raphanus raphanistrum / Arctotheca calendula).

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

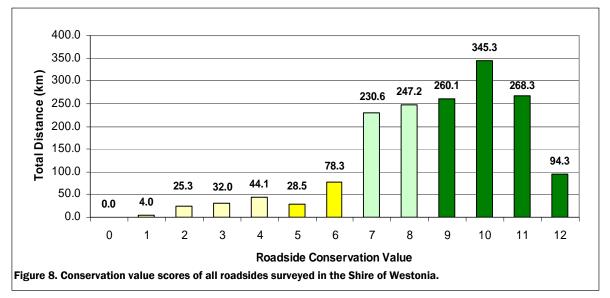
Of the nominated weeds species, the group including Wild Oats, Wild Radish and Capeweed was the most prevalent, recorded along 529.3km (31.9%) of the roads surveyed. The next most commonly recorded weed was African Lovegrass, recorded along 172.6km of roads. Paterson's Curse was recorded along 34.8km (2.1%) of roads and Onion Weed was recorded along 26.6km (1.6%). Only minor populations of Fountain



Grass and Saffron Thistle were found, and these were recorded along 11.6km (0.7%) and 8.5km (0.5%) respectively.

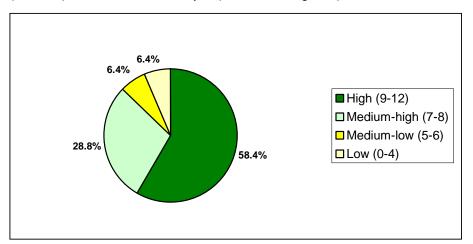
Conservation Value Scores

Conservation value scores were calculated for each section of roadside surveyed. Scores range from 0 to 12, from lowest to highest conservation value respectively (Figure 8). The most frequently recorded roadside conservation value score was 10, with 345.3km (20.8%) of roadsides recording this score. Following this, 268.3km (16.2%) of roadsides recorded a score of 11, 260.1km (15.7%) recorded a score of 9 and 247.2km (14.9%) recorded a score of 8. Roadsides with a score of 7 covered 230.6km (13.9%), a score of 12 covered 94.3km (5.7%), and roadsides with a score of 6 spanned 78.3km (4.7%). Roadsides with a score of 4 spanned 44.1km (2.7%), a score of 3 spanned 32.0km (1.9%), roadsides scoring 5 covered 28.5km (1.7%), a score of 2 spanned 25.3km (1.5%), a score of 1 covered 4.0km (0.2%), and 0km of roadsides scored 0.



Conservation Status

The conservation status category indicates the combined conservation value of roadsides surveyed in the Shire of Westonia. Roadside sections of high conservation value covered 58.4% (968.0km) of the roadsides surveyed. Medium-high conservation value roadsides accounted for 28.8% of the total (477.8km), medium-low conservation roadside covered 6.4% (106.8km) and roadsides of low conservation value occupied 6.4% (105.4km) of the roadsides surveyed (Table 3 and Figure 9).

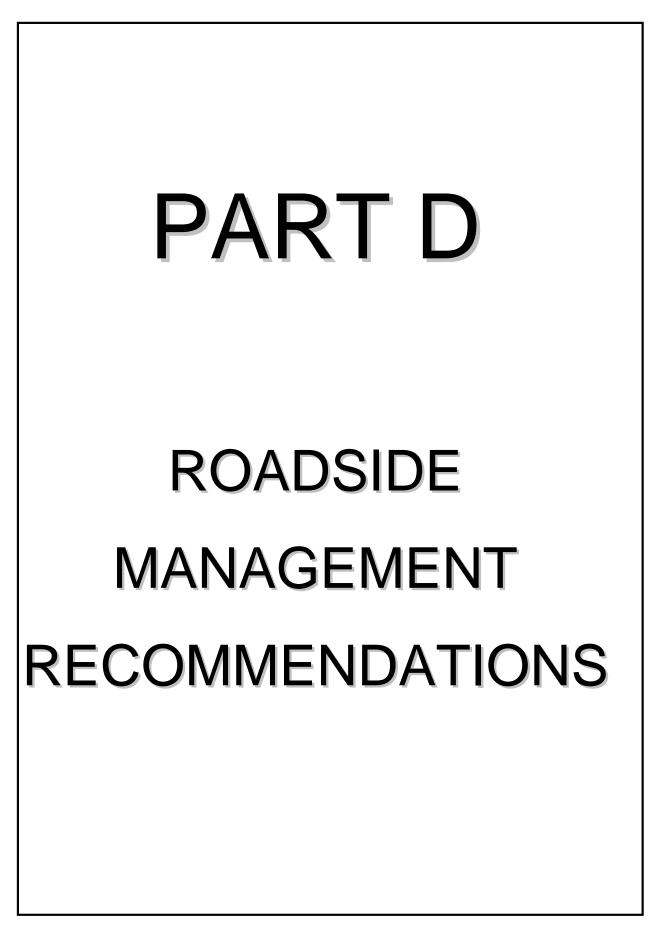


Flora Roads

A Flora Road is one which has special conservation value because of the vegetation contained within the road reserve. The Roadside Conservation Committee has prepared *Guidelines for the Nomination and Management of Flora Roads* (Appendix 7). Although there are presently no Flora Roads designated within the Shire of Westonia, the roadside survey and 2007 RCV map has highlighted a high number of roadsides that have the potential to be declared as such. Roadsides, or large sections of roadsides, determined as having high conservation value in the Shire of Westonia include those along:

- Carrabin South Road;
- Clothier Road;
- Hodgeson Road;
- Smith Road;
- Graham Road;
- Henderson Road;
- Westonia Road;
- Boodarockin Road;
- George Road;
- Maxfield Road;
- Warrachuppin Road;
- Lake Deborah Road;
- Boodarockin North Road;
- Webb Road;

- Duncan Road;
- Hunter Road;
- Warrachuppin North Road;
- Hunter West Road;
- Geelakin Road;
- English Road;
- Echo Valley Road;
- Morrison Road;
- Farina Road;
- Brown Road;
- Elachbutting Road;
- Grosser Road;
- Masefield Road; and
- Rabbit Proof Fence Road.



1.0 Management Recommendations

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

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

- Guidelines for Managing Special Environmental Areas in Transport Corridors; and
- Handbook of Environmental Practice for Road Construction and Maintenance Works.
- 1.1 Protect high conservation value roadsides by maintaining and enhancing the native plant communities. This can be achieved by:
 - retaining remnant vegetation;
 - minimising disturbance to existing roadside vegetation;
 - minimising disturbance to soil; and
 - preventing or controlling the introduction of weeds.

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

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

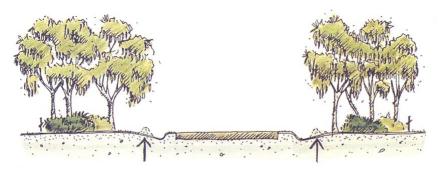
1.3 Improve roadside sections of medium to low conservation value by:

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

2.0 Minimising Disturbance

Minimal disturbance can be achieved by:

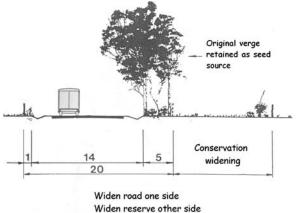
- adopting a road design that occupies the minimum space;
- diverting the line of a table drain to avoid disturbing valuable flora;
- pruning branches, rather than removing the whole tree or shrub;
- not dumping spoil on areas of native flora;
- applying the Fire Threat Assessment (see RCC Roadside Manual)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



Avoid windrowing drain material into vegetation



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.



Above: 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:

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

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

4.0 Setting Objectives

The objective of all roadside management should be to:

Protect

- native vegetation
- rare or threatened flora or fauna
- cultural and heritage values
- community assets from fire

Maintain

- safe function of the road
- native vegetation communities
- fauna habitats and corridors
- visual amenity and landscape qualities
- water quality

- Minimise
- land degradation
- spread of weeds and vermin
- spread of soil borne pathogens
- risk and impact of fire
- disturbance during installation and maintenance of service assets
- Enhance
- indigenous vegetation communities
- fauna habitats and corridors

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Appendix



SURVEY TO DETERMINE SHIRE OF	THE CON	SERVATIO	N VALUE OF ROADSIDES IN THE	C/-	Locked Ba	iservation Committee g 104 ery Centre WA 6983	Phone: (08) 9334 0 Fax: (08) 9334 019	
Date			No. OF DIFFERENT NATIVE SPECIE		nacy bears	NOMINATED WEEDS		
Observer(s)			0-5	<u> </u>				
Road Name			6 – 19 Over 20			< 20% total weeds		
Shire			VALUE AS A BIOLOGICAL CORRID	OR		20 – 80% total weeds > 80% total weeds		
Nearest named place			Connects uncleared areas					
Direction of travel (N,S,E,V	N)		Flowering shrubs Large trees with hollows			< 20% total weeds		
Section No			Hollow logs	ē	ē	20 – 80% total weeds > 80% total weeds		
Starting Point			PREDOMINANT ADJOINING LANDU	<u>SE</u>				
Odometer reading			Agricultural crop or pasture: - Completely cleared			< 20% total weeds		
Ending Point			- Scattered Uncleared land			20 – 80% total weeds > 80% total weeds		
Odometer reading			Plantation of non-native trees Urban or industrial	00000000	000000		-	-
Length of section			Railway Reserve parallel to road Drain Reserve parallel to road	Η				_
WIDTH OF ROAD RESE	RVE (m)		Other:			< 20% total weeds 20 – 80% total weeds		
Side of the road	Left	Right	UTILITIES			> 80% total weeds		
WIDTH OF VEGETATED	ROADSI	DE	Utility Present	⊒				
1 – 5 m			Utilitý Absent Type:			< 20% total weeds 20 – 80% total weeds		
5 – 20 m Over 20 m						> 80% total weeds		Ē
NATIVE VEGETATION O	ON ROADS	SIDE	GENERAL WEEDS					
Tree layer			Few weeds (<20% total plants) Half weeds (20 - 80% total)			< 20% total weeds		
Shrub layer Ground layer			Mostly weeds (>80% total)			20 – 80% total weeds 80% total weeds		
	-	-	Ground layer totally weeds				-	-
EXTENT OF NATIVE VE ROADSIDE	GETATIO	N ON	SALT AFFECTED ROADSIDE			GENERAL COMMENTS	5	
Less than 20%			< 20% salt affected 20 – 80% salt affected					
20 – 80% Over 80%			> 80% salt affected		Ē	OFFICE USE ONLY Conservation value score		

Appendix

2

ROAD #	SECT #	-	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	dth of /eg oad Res	of V	mber Nat ′eg yers		ent of t Veg		mber of ecies		sence /eeds	а	ue as Biol rridor	Cons	adside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280003	1	0.00	1.40	CARRABIN SIDING RD	South	3/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280003	2	1.40	2.10	CARRABIN SIDING RD	East	3/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	1	1	9	9	
4280004	1	0.00	1.30	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	1	1	8	9	HABITAT_TREES
4280004	2	1.30		WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	0	0	0	0	1	1	1	1	6		OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	3	1.70	2.30	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	1	1	0	0	0	0	0	0	0	0	3	3	OATS_RADISH_CAPEWEED
4280004	4	2.30	3.20	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	1	2	0	1	0	1	0	1	0	1	3	8	OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	5	3.20	4.30	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	0	0	1	1	1	1	0	0	6	6	OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	6	4.30	5.80	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	1	2	0	1	0	1	1	1	0	1	3	7	OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	7	5.80		WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	1	1	8	8	OATS_RADISH_CAPEWEED
4280004	8	8.20		WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	1	2	0	1	0	1	1	1	0	0	3	6	OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	9	8.90	10.40	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	1	2	1	1	1	2	0	0	6	8	OATS_RADISH_CAPEWEED
4280004	10	10.40	10.90	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	2	1	1	1	2	1	1	0	9		OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	11	10.90	12.10	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	1	1	0	1	0	1	0	1	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	12	12.10	12.60	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	2	7	8	OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	13	12.60	13.30	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	0	1	0	1	0	1	0	1	3	7	OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	14	13.30	14.50	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	2	6	8	OATS_RADISH_CAPEWEED HABITAT_TREES
4280004	15	14.50	16.00	WALGOOLAN SOUTH RD	South	9/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	1	6	7	OATS_RADISH_CAPEWEED
4280005	1	0.00	2.77	WARRACHUPPIN RD	North	15/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	dth of /eg oad Res	of V	nber Nat eg yers		ent of Veg		mber of ecies		ence leeds	al	ue as Biol ridor	Cons	adside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280005		2.77	10.43	WARRACHUPPIN RD			0	20	0	0	2	2	1	1	1	1	1	1	0	0	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280005	3	10.43	23.10	WARRACHUPPIN RD	North	15/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	1	1	11	10	AFRICAN_LOVEGRASS HABITAT_TREES
4280005	4	23.10	25.77	WARRACHUPPIN RD	North	15/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	1	1	9	9	AFRICAN_LOVEGRASS
4280005	5	25.77	31.43	WARRACHUPPIN RD	North	15/11/06	s.bright	20	0	0	2	2	1	1	2	2	1	1	1	1	9		AFRICAN_LOVEGRASS HABITAT_TREES
4280005	6	31.43	32.40	WARRACHUPPIN RD	North	15/11/06	s.bright	20	3	0	2	2	2	2	2	2	2	2	1	1	11	9	AFRICAN_LOVEGRASS
4280006	1	0.00	1.20	CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	0	2	2	0	0	0	0	0	0	1	1	4	5	OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
4280006	2	1.20		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
4280006	3	1.60	2.10	CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	0	2	2	0	0	0	0	1	1	0	0	5		OATS_RADISH_CAPEWEED HABITAT_TREES
4280006	4	2.10		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8		OATS_RADISH_CAPEWEED HABITAT_TREES
4280006	5	2.30		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	0	8		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280006	6	3.10		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	0	1	2	0	0	0	0	0	0	0	0	3	4	OATS_RADISH_CAPEWEED
4280006	7	3.60		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	2	2	9	10	OATS_RADISH_CAPEWEED FOUNTAIN_GRASS AFRICAN_LOVEGRASS
4280006	8	6.60		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	0	2	2	2	2	2	2	2	2	2	2	2	11	11	
4280006	9	8.80	12.00	CARRABIN SOUTH RD	North	3/11/06	s.bright	20	1	1	2	2	2	2	1	2	2	2	2	2	10	11	
4280006	10	12.00		CARRABIN SOUTH RD			s.bright	20	1	0	2	2	2	1	2	1	2	2	2	2	11	10	
4280006	11	12.50	13.30	CARRABIN SOUTH RD	North	3/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	11	HABITAT_TREES

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of /eg oad les	of V	nber Nat ′eg vers		ent of Veg		mber of ecies		ence leeds	a		Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right			Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280006	12	13.30	15.50	CARRABIN SOUTH RD	North	3/11/06	s.bright	20	3	0	2	2	2	2	2	1	2	2	2	2	10	11	
4280006	13	15.50	16.00	CARRABIN SOUTH RD	North	3/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280006	14	16.00		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	OATS_RADISH_CAPEWEED
4280006	15	16.50		CARRABIN SOUTH RD	North	3/11/06	s.bright	20	3	0	2	2	2	1	2	1	2	2	2	2	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280006	16	17.30	17.85	CARRABIN SOUTH RD	North	3/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280007	1	0.00	0.51	BOODAROCKIN RD	East	16/11/06	s.bright	20	3	3	2	2	2	1	2	0	2	1	2	0	10	4	ONION_WEED HABITAT_TREES
4280007	2	0.51	2.13	BOODAROCKIN RD	North	16/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10		ONION_WEED HABITAT_TREES
4280007	3	2.13	6.34	BOODAROCKIN RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8	8	OATS_RADISH_CAPEWEED
4280007	4	6.34	7.35	BOODAROCKIN RD	North	16/11/06	s.bright	20	0	0	2	2	0	1	0	1	0	1	0	0	4	7	OATS_RADISH_CAPEWEED
4280007	5	7.35	10.87	BOODAROCKIN RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7	7	OATS_RADISH_CAPEWEED
4280007	6	10.87	14.88	BOODAROCKIN RD	North	16/11/06	s.bright	20	3	2	2	2	2	2	2	2	2	2	2	2	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280007	7	14.88	18.39	BOODAROCKIN RD	North	16/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	1	1	11	11	OATS_RADISH_CAPEWEED
4280007	8	18.39	19.81	BOODAROCKIN RD	North	16/11/06	s.bright	20	3	1	2	2	2	2	2	2	2	2	2	1	10	10	OATS_RADISH_CAPEWEED HABITAT_TREES
4280007	9	19.81	39.02	BOODAROCKIN RD	North	16/11/06	s.bright	20	1	1	2	2	1	1	2	2	1	1	2	1	10	9	OATS_RADISH_CAPEWEED HABITAT_TREES
4280008	1	0.00	0.42	GOLDFIELDS RD	West	10/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280008	2	0.42	1.64	GOLDFIELDS RD	West	10/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280008	3	1.64		GOLDFIELDS RD			0	20	3	0	2	2	2	1	2	1	2	2	2	1	10	8	
4280008				GOLDFIELDS RD			-	20	0	0	2	2	1	1	2	2	2	2	2	2	10	10	
4280008				GOLDFIELDS RD			s.bright	20	0	0	2	1	1	0	0	0	0	0	0	0	4	2	OATS_RADISH_CAPEWEED

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V Re R	Ith of /eg oad les	of V Lay	Nat 'eg yers	Nat	Veg	Spe	ecies	of W	/eeds	a Cor	Biol ridor	Conse Value	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280008	6	7.79	9.41	GOLDFIELDS RD	West	10/11/06	s.bright	20	0	0	2	2	1	0	1	0	1	0	0	0	6		OATS_RADISH_CAPEWEED PATERSONS_CURSE HABITAT_TREES
4280008	7	9.41	10.02	GOLDFIELDS RD	West	10/11/06	s.bright	20	0	0	2	2	0	0	0	0	0	0	0	0	3	3	OATS_RADISH_CAPEWEED
4280008	8	10.02	10.54	GOLDFIELDS RD	West	10/11/06	s.bright	20	0	0	2	2	1	0	1	0	1	0	0	0	6		OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280008	9	10.54		GOLDFIELDS RD				20	0	0	1	1	0	0	0	0	0	0	0	0	2	2	OATS_RADISH_CAPEWEED
4280008	10	11.56	12.48	GOLDFIELDS RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	1	0	8		OATS_RADISH_CAPEWEED HABITAT_TREES
4280008	11	12.48	14.79	GOLDFIELDS RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	0	7	7	OATS_RADISH_CAPEWEED HABITAT_TREES
4280008	12	14.79	16.91	GOLDFIELDS RD	West	10/11/06	s.bright	20	0	0	2	2	2	1	2	1	2	1	0	0	9	6	OATS_RADISH_CAPEWEED
4280009	1	0.00	4.45	STONEMAN RD	East	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8		OATS_RADISH_CAPEWEED HABITAT_TREES
4280009	2	4.45	7.99	STONEMAN RD	East	15/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280009	3	7.99	11.04	STONEMAN RD	East	15/11/06	s.bright	20	3	0	2	2	2	1	2	1	2	1	2	1	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280009	4	11.04	11.38	STONEMAN RD	East	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8	8	OATS_RADISH_CAPEWEED HABITAT_TREES
4280010	1	0.00	4.50	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	2	2	2	2	0	0	8	8	OATS_RADISH_CAPEWEED
4280010	2	4.50	5.70	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	1	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
4280010	3	5.70	6.70	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	0	1	0	1	0	1	0	0	4		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280010	4	6.70	11.90	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7	7	OATS_RADISH_CAPEWEED
4280010		11.90				16/11/06	Ŭ	20	0	0	2	2	1	0	1	0	1	0	1	0	8		OATS_RADISH_CAPEWEED HABITAT_TREES
4280010		12.50				16/11/06	5	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED
4280010	7	16.30				16/11/06	0	20	0	0	1	2	1	1	0	1	1	1	0	0	5	7	OATS_RADISH_CAPEWEED
4280010	8	17.80	19.60	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	0	0	7	7	HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	of Rd Res	V Re F	Ith of /eg oad les	of V La	Nat 'eg yers	Nat	Veg	Spe	ecies	of W	/eeds	a l Cor	Biol ridor	Conse Value	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280010	9	19.60	22.10	BEGLEY RD	North	16/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280010	10	22.10	23.70	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	0	0	1	1	0	0	6	6	OATS_RADISH_CAPEWEED
4280010	11	23.70	30.50	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	1	1	9		ONION_WEED OATS_RADISH_CAPEWEED HABITAT_TREES
4280010	12	30.50	31.60	BEGLEY RD	North	16/11/06	s.bright	20	0	0	1	2	0	1	0	1	0	1	0	1	3		OATS_RADISH_CAPEWEED HABITAT_TREES
4280010	13	31.60	32.20	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	0	0	1	1	1	1	0	1	6		OATS_RADISH_CAPEWEED HABITAT_TREES
4280010	14	32.20	33.56	BEGLEY RD	North	16/11/06	s.bright	20	0	0	2	2	0	1	0	1	0	1	0	0	4		PATERSONS_CURSE OATS_RADISH_CAPEWEED HABITAT_TREES
4280011	1	0.00	1.17	MAXFIELD RD	North	15/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	1	1	9		AFRICAN_LOVEGRASS HABITAT_TREES
4280011	2	1.17	7.13	MAXFIELD RD	North	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280011	3	7.13	8.60	MAXFIELD RD	North	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	0	0	0	0	5		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280011	4	8.60	15.77	MAXFIELD RD	North	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280011	_	15.77		MAXFIELD RD		15/11/06		20	1	1	2	2	2	2	2	2	2	2	1	1	11		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280011	6	24.53	28.70	MAXFIELD RD	North	15/11/06	s.bright	20	1	1	2	2	1	1	2	2	2	2	1	1	9		OATS_RADISH_CAPEWEED HABITAT_TREES
4280012	1	0.00	10.05	DADDOW RD	West	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280012	2	10.05	17.60	DADDOW RD	West	15/11/06	s.bright	20	0	0	2	2	1	1	2	2	1	1	1	1	8	8	OATS_RADISH_CAPEWEED
4280012	3	17.60	20.45	DADDOW RD	West	15/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	0	0	8		OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	dth of /eg oad Res	of V	mber Nat 'eg yers		ent of Veg		mber of ecies		sence leeds	a	ue as Biol rridor	Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280012	4	20.45	22.29	DADDOW RD	West	15/11/06	s.bright	20	1	1	2	2	1	1	1	1	2	2	0	0	7	7	OATS_RADISH_CAPEWEED
4280012	5	22.29	24.04	DADDOW RD	West	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	0	0	8		OATS_RADISH_CAPEWEED HABITAT_TREES
4280012	6	24.04	25.09	DADDOW RD	West	15/11/06	s.bright	20	0	0	2	2	0	0	0	0	0	0	0	0	4		OATS_RADISH_CAPEWEED HABITAT_TREES
4280012	7	25.09	26.84	DADDOW RD	West	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280013	1	0.00	2.94	MCPHARLIN RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8		OATS_RADISH_CAPEWEED HABITAT_TREES
4280013	2	2.94	3.89	MCPHARLIN RD	East	10/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	0	0	10	10	OATS_RADISH_CAPEWEED
4280013	3	3.89	4.63	MCPHARLIN RD	East	10/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	1	1	9	9	OATS_RADISH_CAPEWEED
4280013	4	4.63	6.67	MCPHARLIN RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280014	1	0.00	0.50	DAY RD	West	3/11/06	s.bright	20	0	0	2	2	0	0	0	0	0	0	1	1	4		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
4280014	2	0.50	1.00	DAY RD	West	3/11/06	s.bright	20	0	0	2	2	2	1	1	1	2	0	1	1	9	6	OATS_RADISH_CAPEWEED HABITAT_TREES
4280014	3	1.00	2.20	DAY RD	West	3/11/06	s.bright	20	0	0	1	1	0	0	0	0	0	0	1	1	4		OATS_RADISH_CAPEWEED HABITAT_TREES
4280014	4	2.20	2.70	DAY RD	West	3/11/06	s.bright	20	0	0	1	1	2	2	1	1	2	2	0	0	8	7	OATS_RADISH_CAPEWEED
4280014				DAY RD			s.bright	20	0	0	2	2	1	1	1	0	1	1	0	1	6		OATS_RADISH_CAPEWEED HABITAT_TREES
4280014				DAY RD		3/11/06	•	20	0	0	1	1	0	0	0	0	0	0	0	0	2		OATS_RADISH_CAPEWEED
4280014	7	3.70	4.10	DAY RD	West	3/11/06	s.bright	20	0	0	2	2	1	0	1	0	1	0	0	0	6	3	OATS_RADISH_CAPEWEED
4280014	_	_	5.30	DAY RD			s.bright	20	0	0	2	2	1	1	1	1	1	1	1	0	7	-	OATS_RADISH_CAPEWEED HABITAT_TREES
4280014	9	5.30	6.70	DAY RD	West	3/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	1	1	1	8		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280015	1	0.00	0.22	ECHO VALLEY RD	North	19/11/06	pg	20	0	0	1	1	0	0	0	0	1	1	1	1	5		OATS_RADISH_CAPEWEED PATERSONS_CURSE

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	dth of /eg oad Res	of V	nber Nat ′eg yers		ent of Veg		mber of ecies		sence /eeds	a		Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280015	2	0.22	-	ECHO VALLEY RD	North	19/11/06	pg	20	0	0	2	1	1	0	1	0	1	1	2	2	9		OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280015	3	1.13		ECHO VALLEY RD	North	19/11/06	pg	20	0	0	2	0	1	0	0	0	1	0	2	1	8		OATS_RADISH_CAPEWEED PATERSONS_CURSE HABITAT_TREES
4280015	4	1.65		ECHO VALLEY RD	North	19/11/06	pg	20	0	0	2	0	1	0	1	0	1	0	2	1	9		OATS_RADISH_CAPEWEED PATERSONS_CURSE HABITAT_TREES
4280015	5	2.37		ECHO VALLEY RD	North	19/11/06	pg	20	0	0	2	1	1	0	1	0	1	0	2	1	9	4	OATS_RADISH_CAPEWEED
4280015	6	2.68	3.30	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	1	1	1	2	1	2	2	11	9	OATS_RADISH_CAPEWEED
4280015	7	3.30		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	2	2	10	10	OATS_RADISH_CAPEWEED
4280015	8	3.91		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	1	2	1	1	2	2	2	2	10	11	OATS_RADISH_CAPEWEED
4280015	9	5.93		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	1	1	2	2	2	2	11		OATS_RADISH_CAPEWEED HABITAT_TREES
4280015	10	6.35		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	1	1	2	2	2	2	2	2	11		OATS_RADISH_CAPEWEED HABITAT_TREES
4280015	11	7.16		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	1	1	2	2	2	2	2	2	11	11	HABITAT_TREES
4280015	12	8.28	8.70	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	1	2	2	2	1	2	2	12	10	OATS_RADISH_CAPEWEED
4280015	13	8.70	11.91	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	1	1	2	2	2	2	2	2	11		OATS_RADISH_CAPEWEED HABITAT_TREES
4280015	14	11.91	12.83	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	10	11	
4280015	15	12.83	13.34	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	10	11	HABITAT_TREES
4280015	16	13.34		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	10	11	
4280015		13.56		ECHO VALLEY RD		19/11/06	. 0	40	1	1	2	2	2	2	2	2	2	2	2	2	10	11	
4280015	18	14.28		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	1	1	2	2	2	2	2	2	11	11	PATERSONS_CURSE

ROAD #	SECT #	-	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of /eg oad les	of V	nber Nat ′eg yers		ent of t Veg		mber of ecies		ence leeds	al		Conse	ndside ervation e (0-12)	Final Overlays (Listed if Present)
							, I	(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280015	19	14.79	16.51	ECHO VALLEY RD	North	19/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	2	2	10	11	PATERSONS_CURSE
4280015	20	16.51	17.13	ECHO VALLEY RD	North	19/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	2	2	10	11	
4280015	21	17.13		ECHO VALLEY RD	North	19/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	2	2	10	11	
4280015	22	17.44	17.96	ECHO VALLEY RD	North	19/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	2	2	10	11	
4280015	23			ECHO VALLEY RD		19/11/06		40	1	1	2	2	2	2	2	2	2	2	2	2	11	11	
4280015	24	19.37		ECHO VALLEY RD		19/11/06		40	3	1	2	2	2	2	2	2	2	2	2	2	10	11	HABITAT_TREES
4280015	25	19.79	27.41	ECHO VALLEY RD	North	19/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280015	26	27.41	27.72	ECHO VALLEY RD	North	19/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280015	27	27.72	28.24	ECHO VALLEY RD	North	19/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280015	28	28.24	29.06	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	11	11	
4280015	29	29.06	31.17	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	11	
4280015	30	31.17		ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	12	
4280015	31	32.39	32.90	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	12	
4280015	32	32.90	33.22	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	12	
4280015	33	33.22	34.84	ECHO VALLEY RD	North	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	2	11	12	
4280015	34	34.84	35.15	ECHO VALLEY RD	North	19/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280015	35	35.15	35.87	ECHO VALLEY RD	North	19/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	2	2	10	10	HABITAT_TREES
4280016	1	0.00	0.72	LEACHES RD	West	2/11/06	s.bright	20	3	0	2	2	2	1	2	1	2	2	2	1	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	2	0.72	1.43	LEACHES RD	West	2/11/06	s.bright	20	3	1	2	2	2	1	2	1	2	2	2	1	12		AFRICAN_LOVEGRASS HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	۱ R	dth of /eg oad Res	of V	mber Nat 'eg yers		ent of Veg		mber of ecies		sence /eeds	а	ue as Biol rridor	Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280016	3	1.43	2.55	LEACHES RD	West	2/11/06	s.bright	20	0	0	1	1	0	0	0	0	0	0	0	1	3		AFRICAN_LOVEGRASS HABITAT_TREES
4280016	4	2.55	4.56	LEACHES RD	West	2/11/06	s.bright	20	0	1	1	2	0	1	0	1	0	1	0	2	3		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	5	4.56	4.88	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	1	2	2	9	9	AFRICAN_LOVEGRASS
4280016	6	4.88	5.29	LEACHES RD	West	2/11/06	s.bright	20	0	0	0	0	0	0	0	0	0	0	0	0	1		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	7	5.29	5.81	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	0	1	0	1	0	1	0	1	4	-	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	8	5.81	6.13	LEACHES RD	West	2/11/06	s.bright	20	0	1	2	2	1	1	1	1	1	1	0	0	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	9	6.13	6.84	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	0	0	1	1	1	1	1	1	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	10	6.84	7.26	LEACHES RD	West	2/11/06	s.bright	20	0	2	2	2	0	0	1	0	1	1	0	1	6		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	11	7.26	8.07	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	1	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	12	8.07	8.79	LEACHES RD	West	2/11/06	s.bright	20	0	0	1	1	0	0	0	0	0	0	0	0	2		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016		8.79	9.40	LEACHES RD		2/11/06	s.bright	20	0	0	2	2	0	0	0	0	0	0	1	1	4		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	14	9.40	10.02	LEACHES RD	West	2/11/06	s.bright	20	0	0	0	0	0	0	0	0	0	0	0	0	2		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	15	10.02	10.53	LEACHES RD	West	2/11/06	s.bright	20	0	0	1	2	0	0	0	0	0	0	1	1	4		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	16	10.53		LEACHES RD			s.bright	20	0	0	0	0	0	0	0	0	0	0	0	0	2		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	17	11.55	12.27	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	0	0	0	0	0	1	1	2	1	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	ith of /eg oad Res	of V	mber Nat Veg yers		ent of Veg		mber of ecies		sence /eeds	а		Conse	ndside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280016	18	12.27	12.58	LEACHES RD	West	2/11/06	s.bright	20	2	0	2	2	1	0	1	0	1	0	2	1	9		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	19	12.58	13.10	LEACHES RD	West	2/11/06	s.bright	20	0	0	1	1	0	0	0	0	0	0	1	1	4		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	20	13.10	13.51	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	21	13.51	14.13	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280016	22	14.13	14.84	LEACHES RD	South	2/11/06	s.bright	20	0	3	0	2	0	1	0	1	0	1	0	2	2		FOUNTAIN_GRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	23	14.84	15.16	LEACHES RD	South	2/11/06	s.bright	20	0	0	2	1	1	0	1	0	1	0	2	0	9		FOUNTAIN_GRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	24	15.16	18.31	LEACHES RD	South	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	8		FOUNTAIN_GRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	25	18.31	18.63	LEACHES RD	South	2/11/06	s.bright	20	1	1	1	1	0	0	0	0	0	0	1	0	4		PATERSONS_CURSE OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	26	18.63	18.94	LEACHES RD	West	2/11/06	s.bright	20	1	1	1	1	0	0	0	0	0	0	1	0	4		PATERSONS_CURSE OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	27	18.94	19.46	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	28	19.46	20.67	LEACHES RD	West	2/11/06	s.bright	20	0	0	2	2	0	2	1	1	0	1	2	0	6		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	of Rd Res	N R F	dth of /eg oad Res	of V La	Nat eg yers	Nat	Veg	Spe	of ecies	of V	sence Veeds	a Cor	Biol rridor	Conse Value	adside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280016	29	20.67	21.19	LEACHES RD	West	2/11/06	s.bright	20	0	0	1	2	0	1	0	1	0	1	0	2	3		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280016	30	21.19	21.47	LEACHES RD			s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	9		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280018	1	0.00	1.89	GEORGE RD	East	14/11/06	s.bright	20	1	1	2	2	1	1	1	1	2	2	0	0	8	8	HABITAT_TREES
4280018	2	1.89	5.19	GEORGE RD	East	14/11/06	s.bright	20	1	1	2	2	2	2	1	1	2	2	0	0	9		OATS_RADISH_CAPEWEED HABITAT_TREES
4280018	3	5.19	6.18	GEORGE RD	East	14/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	0	0	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280018	4	6.18	16.38	GEORGE RD	East	14/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	1	1	11		OATS_RADISH_CAPEWEED HABITAT_TREES
4280018	5	16.38	18.67	GEORGE RD	East	14/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	2	2	11	11	HABITAT_TREES
4280019	1	0.00	2.74	4 MILE GATE RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280019	2	2.74	3.88	4 MILE GATE RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280019	3	3.88	4.71	4 MILE GATE RD	West	10/11/06	s.bright	20	0	0	2	2	1	0	1	0	1	0	0	0	6		OATS_RADISH_CAPEWEED HABITAT_TREES
4280019	4	4.71	5.95	4 MILE GATE RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	1	0	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280020	1	0.00	1.10	6 MILE GATE RD	West		sara bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280020	2	1.10	1.80	6 MILE GATE RD	West		sara bright	20	0	0	2	1	1	0	1	0	1	0	1	0	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280020	3	1.80	2.10	6 MILE GATE RD	West		sara bright	20	0	0	2	2	1	0	1	0	1	0	1	0	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	dth of /eg oad Res	of V	mber Nat 'eg yers		ent of Veg		mber of ecies		sence /eeds	al	ue as Biol ridor	Conse	idside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280020	4	2.10	2.90	6 MILE GATE RD	West		sara bright	20	0	0	2	2	1	0	1	0	1	0	1	0	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280020	5	2.90	3.20	6 MILE GATE RD	West	1/11/06	sara bright	20	0	0	2	1	1	0	1	0	1	0	1	0	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280020	6	3.20	4.30	6 MILE GATE RD	West	1/11/06	sara bright	20	0	0	1	2	1	1	1	1	1	1	0	0	6	7	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280021		0.00		WARRACHUPPIN NORTH RD				40	0	0	2	2	2	2	1	2	2	2	2	2	11	10	
4280021		1.83		WARRACHUPPIN NORTH RD				40	0	0	2	2	2	2	1	1	2	2	2	2	11	12	
4280021	3	4.15		WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	0	0	2	2	2	2	1	1	2	2	2	2	11	11	OATS_RADISH_CAPEWEED
4280021	4	4.38		WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	0	0	2	2	1	1	1	1	1	1	2	2	9	9	OATS_RADISH_CAPEWEED
4280021	5	5.20		WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	0	0	2	2	2	1	1	1	2	1	2	2	11	8	OATS_RADISH_CAPEWEED
4280021	6	6.23		WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	1	0	2	2	0	0	2	2	2	2	2	2	10	10	OATS_RADISH_CAPEWEED
4280021	7	8.05		WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12		OATS_RADISH_CAPEWEED HABITAT_TREES
4280021	8	10.58	11.60	WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	2	2	12	12	
4280021	9	11.60	14.03	WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	3	1	2	2	2	2	1	2	2	2	2	2	9	12	
4280021	10	14.03	15.45	WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	3	1	2	2	2	1	2	1	2	2	2	2	10	10	HABITAT_TREES
4280021	11	15.45	16.88	WARRACHUPPIN NORTH RD	North	18/11/06	pg	40	1	1	2	2	2	1	2	1	2	2	2	2	12	10	HABITAT_TREES
4280021				WARRACHUPPIN NORTH RD				40	1	1	2	2	2	1	2	1	2	2	2	2	12	10	
4280021	13	17.50	18.63	WARRACHUPPIN NORTH RD			pg	40	1	1	2	2	2	1	2	1	2	2	2	2	12	10	PATERSONS_CURSE
4280022	1	0.00	2.06	HENDERSON RD	North	1/11/06	sara bright	20	0	0	2	2	1	1	1	1	2	2	2	2	9	9	OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	ith of /eg oad Res	of V	mber Nat 'eg yers		ent of Veg		mber of ecies		sence /eeds	a	ue as Biol rridor	Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280022	2	2.06	4.12	HENDERSON RD	North		sara bright	20	0	0	2	2	2	2	2	2	2	2	2	2	12		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280022			4.57	HENDERSON RD			sara bright	20	0	0	2	2	1	1	1	1	1	1	2	2	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280022	4	4.57	4.93	HENDERSON RD	North		sara bright	20	0	0	2	2	1	1	0	0	1	1	1	1	7	7	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280022	5	4.93	5.29	HENDERSON RD	North		sara bright	20	1	3	2	2	1	1	1	1	1	0	0	0	7	-	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280022	6	5.29	9.35	HENDERSON RD	East	1/11/06	sara bright	20	0	0	2	2	2	1	2	1	2	2	1	1	11	9	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280023	1	0.00	2.86	CLOTHIER RD	East	31/10/06	sara bright	20	0	0	2	2	1	1	1	1	1	1	2	2	9		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280023	2	2.86	3.72	CLOTHIER RD	South	31/10/06	sara bright	20	0	0	0	0	0	0	0	0	0	0	0	0	2		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280023	3	3.72	4.58	CLOTHIER RD	South	31/10/06	sara bright	20	0	0	1	2	0	0	0	0	0	0	0	0	3		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280023	4	4.58	9.84	CLOTHIER RD	East	31/10/06	sara bright	20	1	1	2	2	2	2	2	2	2	2	2	2	12	12	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280025	1	1.40		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	2	2	1	1	1	1	1	1	1	1	8	8	OATS_RADISH_CAPEWEED
4280025	2	6.50		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	2	2	2	2	2	2	2	2	1	1	11	11	OATS_RADISH_CAPEWEED
4280025	3	10.30		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	1	0	2	0	1	0	1	0	1	0	0	2	7	OATS_RADISH_CAPEWEED HABITAT_TREES
4280025	4	11.00		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	0	0	0	0	0	0	2	2	0	0	4	4	OATS_RADISH_CAPEWEED
4280025	5	12.40		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280025	6	13.70		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	1	1	0	0	0	0	0	0	0	0	3	2	OATS_RADISH_CAPEWEED
4280025	7	14.70		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	1	2	2	2	2	2	2	2	2	0	0	9	9	OATS_RADISH_CAPEWEED

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	R	dth of /eg oad Res	of V	mber Nat eg vers		ent of Veg		mber of ecies		sence /eeds	a		Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right			Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280025	8	16.00	17.50	RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	1	1	0	0	0	0	0	0	0	0	0	3	2	OATS_RADISH_CAPEWEED
4280025	9	17.50	18.80	RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	1	2	2	1	1	1	1	1	1	0	1	7	7	OATS_RADISH_CAPEWEED
4280025	10	18.80		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	1	2	2	1	0	1	0	1	0	0	0	7	4	OATS_RADISH_CAPEWEED
4280025	11	20.10		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	1	2	2	2	2	2	2	2	2	1	1	11	10	OATS_RADISH_CAPEWEED
4280025	12	22.40		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	1	1	2	2	1	1	1	1	1	1	0	0	7	6	OATS_RADISH_CAPEWEED ONION_WEED HABITAT_TREES
4280025	13	29.20		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	2	2	0	1	0	1	0	1	0	0	4	7	OATS_RADISH_CAPEWEED
4280025	14	30.10		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	2	2	1	1	1	1	1	1	0	0	7	7	OATS_RADISH_CAPEWEED
4280025	15	35.30		RABBIT PROOF FENCE RD	North	20/11/06	s.bright	40	0	0	2	2	1	0	1	0	1	0	0	0	7	4	OATS_RADISH_CAPEWEED
4280025	16	36.80		RABBIT PROOF FENCE RD	North	20/11/06	pg	40	0	0	2	2	1	1	1	1	1	1	1	1	8	8	OATS_RADISH_CAPEWEED
4280025	17	40.40	40.70	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	0	9	8	OATS_RADISH_CAPEWEED HABITAT_TREES
4280025	18	40.70		RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	1	2	2	2	1	2	2	2	1	2	1	12	9	OATS_RADISH_CAPEWEED HABITAT_TREES
4280025	19	43.70		RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	1	2	2	1	2	1	2	2	2	2	1	10	11	HABITAT_TREES
4280025	20	44.50		RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	OATS_RADISH_CAPEWEED
4280025	21	44.70		RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	1	2	2	2	2	2	1	2	2	2	1	12	10	OATS_RADISH_CAPEWEED HABITAT_TREES
4280025				RABBIT PROOF FENCE RD		20/11/06	. 0	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280025	23			RABBIT PROOF FENCE RD		20/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	

ROAD #	SECT #	-	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	۱ R	dth of /eg oad Res	of V	mber Nat 'eg yers		ent of Veg		mber of ecies		sence /eeds	а		Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right			Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280025	24	46.00	46.50	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280025	25	46.50	47.00	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	2	2	2	2	2	2	1	1	10	11	
4280025			48.80	RABBIT PROOF FENCE RD		20/11/06		40	1	0	2	2	2	2	2	2	2	2	2	1	10	10	HABITAT_TREES
4280025	27	48.80	49.00	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	2	2	2	2	2	2	1	1	9	11	
4280025	28	49.00	49.20	RABBIT PROOF FENCE RD		20/11/06		40	1	0	2	2	2	2	2	2	2	2	2	2	12	12	HABITAT_TREES
4280025	29	49.20	50.90	RABBIT PROOF FENCE RD		20/11/06		40	1	0	2	2	2	2	2	2	2	2	1	1	11	11	
4280025	30	50.90	53.70	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	2	2	2	2	2	2	1	1	11	11	OATS_RADISH_CAPEWEED
4280025	31	53.70	53.90	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	2	2	2	2	2	2	1	1	11	11	OATS_RADISH_CAPEWEED
4280025	32	53.90	54.80	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	2	2	2	2	2	2	1	1	11	9	
4280025	33	54.80	55.20	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	2	2	2	2	2	2	1	1	11	9	
4280025	34	55.20	55.50	RABBIT PROOF FENCE RD		20/11/06		40	1	0	2	2	2	2	2	2	2	2	1	1	11	9	
4280025	35	55.50		RABBIT PROOF FENCE RD		20/11/06		40	1	0	2	2	2	2	2	2	2	2	1	1	11	9	
4280025	36	56.40	56.90	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	0	2	2	2	1	2	1	2	2	1	1	11	9	OATS_RADISH_CAPEWEED
4280025	37	56.90	57.60	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	1	2	2	1	1	1	1	1	2	1	1	8	9	OATS_RADISH_CAPEWEED HABITAT_TREES
4280025	38	57.60	58.00	RABBIT PROOF FENCE RD	North	20/11/06	pg	40	1	1	2	2	2	1	2	1	1	1	2	1	11		OATS_RADISH_CAPEWEED HABITAT_TREES
4280025	39	73.60	73.80	NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	3	2	2	1	2	1	2	2	2	2	1	10	9	HABITAT_TREES
4280025	40	73.80	74.30	NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	0	2	0	2	2	2	0	11	5	HABITAT_TREES

ROAD #	SECT #	-	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	ith of /eg oad Res	of V	mber Nat /eg yers		ent of t Veg		mber of ecies		sence Veeds	а	ue as Biol rridor	Conse	ndside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280025				NORTH RABBIT PROOF FENCE ROAD		20/11/06	-	40	1	0	2	1	1	0	1	0	2	2	1	0	9	5	HABITAT_TREES
4280025	42	74.90		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	0	1	0	1	0	2	2	2	0	10	4	HABITAT_TREES
4280025	43	75.50		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	0	1	0	2	2	1	1	9	6	HABITAT_TREES
4280025	44	75.70		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	2	0	1	0	2	2	2	0	11	5	HABITAT_TREES
4280025	45	75.90		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	0	1	0	2	2	1	0	9	5	HABITAT_TREES
4280025	46	76.40		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	1	1	0	2	2	2	0	10	6	HABITAT_TREES
4280025	47	76.80		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	1	1	1	1	1	0	2	2	1	1	8	7	HABITAT_TREES
4280025	48	77.40		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	2	2	10	10	HABITAT_TREES
4280025	49	77.80		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	0	2	2	1	1	9	8	HABITAT_TREES
4280025	50	78.50		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	2	1	1	1	2	2	1	1	10	9	OATS_RADISH_CAPEWEED
4280025	51	78.80		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	1	9	9	OATS_RADISH_CAPEWEED
4280025	52	79.10		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	1	1	0	2	2	1	0	9	6	
4280025	53	79.50		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	1	9	9	

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of 'eg oad les	of V	nber Nat eg yers		ent of Veg		mber of ecies		sence Veeds	а	ue as Biol rridor	Cons	idside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280025	54	79.80	80.00	NORTH RABBIT PROOF FENCE ROAD		20/11/06		40	1	0	2	2	1	1	1	1	2	2	1	1	9	9	
4280025	55	80.00		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	2	1	2	2	2	1	11	9	HABITAT_TREES
4280025	56	80.40		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	2	1	10	9	HABITAT_TREES
4280025	57	81.40		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	1	1	1	2	2	1	0	9	7	
4280025	58	82.50		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	2	2	10	10	HABITAT_TREES
4280025	59	82.70		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	1	1	1	2	2	2	1	10	8	HABITAT_TREES
4280025	60	83.20		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	2	1	2	2	2	0	11	8	HABITAT_TREES
4280025	61	83.40		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	1	9	9	
4280025	62	83.70		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	1	1	1	1	1	0	2	2	1	0	8	6	
4280025	63	84.50		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	2	1	2	2	2	1	1	9	11	
4280025	64	84.90		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	1	9	9	
4280025	65	85.10		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	2	1	2	1	2	2	1	1	11	9	
4280025	66	85.50		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	1	1	1	1	0	2	2	1	0	9	6	HABITAT_TREES

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of eg oad es	of V	nber Nat ′eg yers		ent of Veg		mber of ecies		sence Veeds	а	ue as Biol rridor	Cons	ndside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
42800256	67			NORTH RABBIT PROOF FENCE ROAD		20/11/06		40	1	0	2	2	2	1	2	1	2	2	1	1	11	9	
42800256				NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	1	9	9	
42800256	69	87.30		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	1	8	9	
42800257	70	88.60		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	2	8	10	HABITAT_TREES
42800257	71	88.90		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	1	2	1	1	0	1	2	2	1	2	7	10	HABITAT_TREES
42800257	72	89.20		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	2	2	2	2	2	2	1	1	11	11	
42800257	73	90.20		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	2	2	1	2	2	1	1	10	9	
42800257	74	90.60		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	2	1	1	2	2	2	1	10	9	HABITAT_TREES
42800257	75	92.10		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	2	2	1	1	2	2	1	1	10	10	HABITAT_TREES
42800257	76	93.20		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	1	1	1	1	1	1	2	2	1	1	8		OATS_RADISH_CAPEWEED HABITAT_TREES
42800257	77	94.60		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	0	2	2	1	1	1	1	2	2	1	1	9		OATS_RADISH_CAPEWEED HABITAT_TREES
42800257	78	97.00		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	3	2	2	2	1	2	1	2	2	2	1	10	9	HABITAT_TREES
42800257	79	97.70		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	3	0	2	2	2	2	2	2	2	2	1	1	9	9	

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	dth of /eg oad Res	of V	nber Nat eg yers		ent of Veg		mber of ecies		ence eeds	al		Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right			Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280025		99.40		NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	3	2	2	2	2	2	2	2	2	1	2	9	10	HABITAT_TREES
4280025	81	99.70	101.10	NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	3	2	2	2	2	2	2	2	2	1	1	9	9	
4280025	82	101.10	101.60	NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	3	2	2	2	2	2	2	2	2	1	1	9	9	
4280025	83	101.60	102.20	NORTH RABBIT PROOF FENCE ROAD	North	20/11/06	pg	40	1	3	2	2	2	2	2	2	2	2	1	1	9	9	
4280030	1	0.00	1.20	CHESTER RD	North East	20/11/06	pg	40	1	1	2	2	2	2	1	1	2	2	1	1	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280030	2	1.20	1.60	CHESTER RD	North East	20/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	12	HABITAT_TREES
4280030	3	1.60	1.80	CHESTER RD	North East	20/11/06	pg	20	1	1	2	2	1	0	1	0	2	2	0	1	8	7	
4280030	4	1.80	2.60	CHESTER RD	East	20/11/06	pg	20	1	1	2	2	1	1	1	1	2	2	1	1	9	9	
4280030	5	2.60	4.10	CHESTER RD	East	20/11/06	pg	20	1	1	2	2	2	2	2	2	2	2	2	1	12	11	HABITAT_TREES
4280030	6	4.10	4.70	CHESTER RD	East	20/11/06	pg	40	1	3	2	2	2	2	2	2	2	2	1	1	11	11	
4280030	7	4.70	4.90	CHESTER RD	East	20/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280030	8	4.90	5.20	CHESTER RD	East	20/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	2	11	12	
4280030	9	5.20	5.60	CHESTER RD	East	20/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280030	10	5.60	8.60	CHESTER RD	East	20/11/06	pg	40	1	3	2	2	2	2	2	2	2	2	1	1	10	9	
4280030	11	8.60	9.70	CHESTER RD	North	20/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280030	12	9.70	9.90	CHESTER RD	North	20/11/06	pg	40	3	1	2	2	2	1	1	1	2	2	1	1	9	8	
4280030	13	9.90	10.20	CHESTER RD	North	20/11/06	pg	40	3	1	2	2	1	1	1	0	2	2	1	1	8	8	
4280030	14	10.20	10.80	CHESTER RD	East	20/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	1	1	10	11	
4280030	15	10.80	11.70	CHESTER RD	East	20/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280030	16	11.70	12.30	CHESTER RD	East	20/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280030	17	12.30	13.50	CHESTER RD	East	20/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280030	18	13.50	14.20	CHESTER RD	East	20/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280031	1	0.00	0.32	ELACH BUTTING RD	South	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V Re	Ith of eg bad es	of V	nber Nat eg vers		ent of Veg		mber of ecies		ence leeds	al		Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280031	2	0.32		ELACH BUTTING RD	South	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280031	3	2.94		ELACH BUTTING RD	South	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	12	HABITAT_TREES
4280031	4	4.46		ELACH BUTTING RD				40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280031	5	5.08		ELACH BUTTING RD				40	3	1	2	2	1	1	1	1	2	2	1	1	7	9	
4280031				ELACH BUTTING RD				40	3	0	2	2	1	2	1	2	2	2	1	2	7	12	HABITAT_TREES
4280031				ELACH BUTTING RD				40	3	1	2	2	1	2	1	2	2	2	1	1	7	11	
4280031	8	6.54		ELACH BUTTING RD				40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280031	9	6.86		ELACH BUTTING RD	West			40	1	1	2	2	2	1	2	1	2	2	2	2	12	9	HABITAT_TREES
4280031	10	9.58		ELACH BUTTING RD	West			40	1	1	2	2	1	1	1	1	2	2	2	2	9	9	HABITAT_TREES
4280031	11	10.10		ELACH BUTTING RD	West			40	1	1	2	2	2	1	2	1	2	2	2	2	11	9	HABITAT_TREES
4280031	12	10.32		ELACH BUTTING RD	West			40	1	1	2	2	2	2	2	2	2	2	2	2	11	11	HABITAT_TREES
4280031	13	11.84		ELACH BUTTING RD	West			40	1	1	2	2	1	1	1	1	2	2	2	2	9	9	
4280031	14	12.66		ELACH BUTTING RD	West			40	1	1	2	2	1	1	1	1	2	2	2	2	9	8	
4280031	15			ELACH BUTTING RD	West			40	1	1	2	2	2	1	2	1	2	2	2	2	11	9	
4280031	16	13.99		ELACH BUTTING RD	West			40	2	0	2	2	2	1	2	0	2	2	2	2	10	8	HABITAT_TREES
4280031	17	15.51	16.03	ELACH BUTTING RD	South West	19/11/06	pg	40	1	1	2	2	2	1	2	1	2	2	2	2	10	9	HABITAT_TREES
4280031	18			ELACH BUTTING RD	South West	19/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	2	2	10	10	HABITAT_TREES
4280031	19	16.35	17.27	ELACH BUTTING RD	South West	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	11	11	
4280031	20	17.27	17.59	ELACH BUTTING RD	South West	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	11	12	HABITAT_TREES

ROAD #	SECT #	_	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	dth of /eg oad Res	of V	mber Nat ′eg yers		ent of t Veg		mber of ecies		sence /eeds	а	ue as Biol rridor	Cons	adside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280031	21	17.59		ELACH BUTTING RD	South West	19/11/06	pg	40	3	1	2	2	2	2	2	1	2	2	2	2	11	11	
4280031	22	18.11		ELACH BUTTING RD	West			40	3	1	2	2	2	2	2	2	2	2	2	2	11	12	
4280031	23	19.63		ELACH BUTTING RD	West			40	3	1	2	2	2	1	2	1	2	2	2	2	10	10	
4280031	24	20.05		ELACH BUTTING RD	West		. 0	40	3	1	2	2	2	2	1	1	2	2	2	2	9	11	
4280031	25	20.37		ELACH BUTTING RD	West			40	1	1	2	2	2	2	2	2	2	2	2	1	10	11	HABITAT_TREES
4280031	26	22.69		ELACH BUTTING RD	West			40	1	1	2	2	2	2	2	2	2	2	2	2	11	11	
4280031	27	23.11	24.23	ELACH BUTTING RD	South West	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	11	11	
4280032	21	0.00		BOODAROCKIN NORTH RD	North	16/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	1	1	11	11	OATS_RADISH_CAPEWEED HABITAT_TREES
4280032	2	3.13		BOODAROCKIN NORTH RD	North	16/11/06	s.bright	20	1	1	1	1	2	2	0	0	2	2	0	0	6	6	OATS_RADISH_CAPEWEED
4280032	3	5.16		BOODAROCKIN NORTH RD	North	16/11/06	s.bright	20	1	1	2	2	1	1	1	1	1	1	1	1	8	7	OATS_RADISH_CAPEWEED HABITAT_TREES
4280032	4	12.19		BOODAROCKIN NORTH RD	North	16/11/06	s.bright	20	1	3	2	2	2	2	2	2	2	2	2	2	11	10	OATS_RADISH_CAPEWEED
4280032	5	15.61		BOODAROCKIN NORTH RD	North	16/11/06	s.bright	20	1	3	2	2	2	2	2	2	2	2	2	2	10	10	OATS_RADISH_CAPEWEED
4280032	6	16.84		BOODAROCKIN NORTH RD	North	16/11/06	s.bright	20	0	1	2	2	2	2	2	2	2	2	2	2	11	10	
4280032	7	17.37		BOODAROCKIN NORTH RD	North	16/11/06	s.bright	20	0	1	2	2	2	2	2	2	2	2	1	1	11	11	HABITAT_TREES
4280033	1	0.00	11.36	HUNTER RD	West	16/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	0	0	10	10	OATS_RADISH_CAPEWEED HABITAT_TREES
4280034	1	0.00	5.30	FARINA RD	East	16/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	1	1	9	9	
4280034	2	5.30	8.90	FARINA RD	East	16/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	1	1	9	10	HABITAT_TREES
4280034	3	8.90	10.80	FARINA RD	East	16/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	2	2	10	10	OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	of Rd Res	N R F	Ith of /eg oad les	of V La	Nat eg yers	Nat	Veg	Spe	ecies	of W	/eeds	a l Cor	Biol ridor	Conse Value	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280034	4	10.80	16.00	FARINA RD	South	16/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	2	2	12		OATS_RADISH_CAPEWEED HABITAT_TREES
4280035	1	0.00	2.22	WEBB RD	East	18/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	12	
4280035	2	2.22	4.05	WEBB RD	East	18/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	10	
4280035	3	4.05	7.57	WEBB RD	East	18/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	1	12	11	
4280035	4	7.57	8.19	WEBB RD	East	18/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	2	1	10	9	
4280035	5	8.19	8.91	WEBB RD	East	18/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	1	2	9	10	HABITAT_TREES
4280035	6	8.91	9.34	WEBB RD	East	18/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	1	2	9	10	HABITAT_TREES
4280035	7	9.34	9.86	WEBB RD	East	18/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	1	1	9	9	HABITAT_TREES
4280036	1	0.00	0.94	LINDLEY RD	South	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	2	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280036	2	0.94	2.27	LINDLEY RD	South	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	9		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED FOUNTAIN_GRASS HABITAT_TREES
4280036	3	2.27	2.91	LINDLEY RD	South	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280036	4	2.91	3.75	LINDLEY RD	South	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	1	1	9		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280036	5	3.75	5.58	LINDLEY RD	South	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8		AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280036	6	5.58	6.92	LINDLEY RD	South	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	2	2	10	-	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280037	1	0.00	1.40	WARDELL RD	North	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7	7	OATS_RADISH_CAPEWEED
4280037	2	1.40	2.10	WARDELL RD	North	10/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	1	1	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280037	3	2.10	3.30	WARDELL RD	North	10/11/06	s.bright	20	0	3	2	2	2	2	2	2	2	2	1	1	11	9	HABITAT_TREES
4280037	4	3.30	4.00	WARDELL RD	North	10/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	HABITAT_TREES
4280038	1	0.00	1.40	EGG ROCK RD	West	14/11/06	s.bright	20	0	0	2	2	1	0	1	1	2	1	0	0	8		OATS_RADISH_CAPEWEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V Re	Ith of /eg oad les	of V	mber Nat 'eg yers		ent of Veg		mber of ecies		sence /eeds	al		Conse	ndside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280038	2	1.40	2.20	EGG ROCK RD	North West	14/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	0	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280040	1	0.00	1.80	CAPITO RD	East	15/11/06	s.bright	20	0	0	2	2	0	0	0	0	0	0	0	0	2	3	OATS_RADISH_CAPEWEED
4280040	2	1.80	3.20	CAPITO RD	East	15/11/06	s.bright	20	0	0	2	2	1	0	1	0	1	0	0	0	7	4	OATS_RADISH_CAPEWEED
4280040	3	3.20	5.00	CAPITO RD	East	15/11/06	s.bright	20	0	0	2	2	0	0	0	0	1	1	0	0	5		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280040	4	5.00	6.30	CAPITO RD	East	15/11/06	s.bright	20	0	0	2	2	1	1	0	0	0	0	0	0	5		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS ONION_WEED
4280040	5	6.30	6.60	CAPITO RD	East	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280040	6	6.60	9.00	CAPITO RD	East	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED ONION_WEED HABITAT_TREES
4280041	1	0.00	0.80	LOGAN RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280041	2	0.80	1.80	LOGAN RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	0	0	1	1	0	0	6	-	OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280041	3	1.80	3.50	LOGAN RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280041	4	3.50	4.00	LOGAN RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280042	1	0.00	1.30	BENNETT RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	1	1	9		OATS_RADISH_CAPEWEED HABITAT_TREES
4280042	2	1.30	1.90	BENNETT RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	6	6	OATS_RADISH_CAPEWEED
4280042	3	1.90	4.00	BENNETT RD	East	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280044	1	0.00	2.18	CREWS RD	West	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	0	0	0	0	6		OATS_RADISH_CAPEWEED HABITAT_TREES
4280044	2	2.18	3.17	CREWS RD	West	15/11/06	s.bright	20	0	0	0	0	0	0	0	0	0	0	0	0	2	2	OATS_RADISH_CAPEWEED

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of eg bad es	of V	nber Nat eg yers		ent of Veg				sence Veeds	а	ue as Biol rridor	Conse	ndside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280044	3	3.17	4.85	CREWS RD	West	15/11/06	s.bright	20	0	0	2	2	0	0	0	0	0	0	0	0	4		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280045	1	0.00	0.90	HALL RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	1	1	8	8	OATS_RADISH_CAPEWEED
4280045	2	0.90	2.00	HALL RD	West	10/11/06	s.bright	20	0	0	2	2	1	0	1	0	1	0	1	1	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280045	3	2.00	3.00	HALL RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7		OATS_RADISH_CAPEWEED ONION_WEED
4280045	4	3.00	3.90	HALL RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	0	1	1	7		OATS_RADISH_CAPEWEED ONION_WEED HABITAT_TREES
4280046	1	0.00	0.60	STRAHAN RD	West	10/11/06	s.bright	20	0	0	2	1	0	0	0	0	0	0	1	1	4		PATERSONS_CURSE OATS_RADISH_CAPEWEED
4280046	2	0.60	3.60	STRAHAN RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	6	7	OATS_RADISH_CAPEWEED
4280046	3	3.60	4.80	STRAHAN RD	West	10/11/06	s.bright	20	0	0	2	1	1	0	1	0	1	0	0	0	6	3	OATS_RADISH_CAPEWEED
4280047	1	0.00	0.84	CORSINI RD	North	17/10/06	pg	20	0	0	2	2	1	2	1	1	1	2	1	2	8		OATS_RADISH_CAPEWEED ONION_WEED FOUNTAIN_GRASS HABITAT_TREES
4280047	2	0.84	1.59	CORSINI RD	North	17/10/06	pg	20	0	0	2	2	1	1	1	1	1	1	1	1	8		OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280047	3	1.59	2.73	CORSINI RD	North	17/10/06	pg	20	0	0	2	2	2	2	1	1	1	1	2	2	10		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280047	4	2.73	3.37	CORSINI RD	North	17/10/06	pg	20	0	0	1	1	0	1	0	0	1	1	1	1	5		PATERSONS_CURSE OATS_RADISH_CAPEWEED
4280047	5	3.37	4.61	CORSINI RD	North	17/10/06	pg	20	0	0	2	2	0	0	0	0	1	1	0	0	5	5	OATS_RADISH_CAPEWEED
4280047	6	4.61	5.16	CORSINI RD	North	17/10/06	pg	20	0	0	2	1	1	0	0	0	1	1	2	1	8		PATERSONS_CURSE OATS_RADISH_CAPEWEED
4280047			6.30	CORSINI RD		17/10/06		20	0	0	2	2	1	1	1	1	2	2	1	1	9		PATERSONS_CURSE OATS_RADISH_CAPEWEED
4280048			0.19	ENGLISH RD		19/11/06		40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280048			2.49	ENGLISH RD		19/11/06		40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280048	3	2.49	3.18	ENGLISH RD	East	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	OATS_RADISH_CAPEWEED

ROAD #S	BECT #		OD Finish	ROAD NAME	Dir	Date	Observer	of Rd Res	N R F	Ith of /eg oad les	of V La	Nat 'eg yers	Nat	ent of Veg	Spe	of ecies	of V	sence Veeds	a Cor	Biol rridor	Conso Value	adside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
42800484		3.18	3.98	ENGLISH RD	East	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12		OATS_RADISH_CAPEWEED HABITAT_TREES
42800485		3.98	4.97	ENGLISH RD	East	19/11/06	pg	40	1	1	2	2	1	1	1	1	1	2	2	2	9		OATS_RADISH_CAPEWEED HABITAT_TREES
42800486	;	4.97	6.96	ENGLISH RD	East	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	12	12	OATS_RADISH_CAPEWEED
42800487		6.96	7.16	ENGLISH RD	East	19/11/06	pg	40	1	1	2	2	0	2	0	2	1	2	1	1	6	11	OATS_RADISH_CAPEWEED
42800488		7.16	7.55	ENGLISH RD	East	19/11/06	pg	40	1	1	2	2	1	2	1	2	1	2	1	1	8	11	OATS_RADISH_CAPEWEED
42800489		7.55	8.75	ENGLISH RD	East	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11		OATS_RADISH_CAPEWEED PATERSONS_CURSE
42800481	0	8.75	9.94	ENGLISH RD	South East	19/11/06	pg	20	0	0	2	2	2	2	2	2	2	2	2	2	12		OATS_RADISH_CAPEWEED PATERSONS_CURSE
42800481	1	9.94	10.13	ENGLISH RD	South East	19/11/06	pg	20	0	0	2	2	2	2	2	2	2	2	2	2	12	12	
42800481	2			ENGLISH RD	East	19/11/06	. 0	20	0	0	2	2	2	2	2	2	2	2	2	2	11	11	
42800481				ENGLISH RD	East	19/11/06	. 0	20	0	0	2	2	2	2	2	2	2	2	2	2	11	11	
42800481				ENGLISH RD	East	19/11/06		20	0	0	2	2	2	2	2	2	2	2	2	2	11	11	
42800481				ENGLISH RD	East	19/11/06	. 0	20	3	3	2	2	2	2	2	2	2	2	1	2	9	10	
42800501		0.00	0.87	MORRISON RD		16/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	2	2	10	10	
42800502		0.87	10.83	MORRISON RD	East	16/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	1	1	10	10	
42800503		10.83	19.20	MORRISON RD		16/11/06	0	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
42800521		0.00	1.85	MCDOWALL RD	North	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	0	0	0	0	6		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
42800522		1.85	4.70	MCDOWALL RD	North	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
42800523		4.70	8.55	MCDOWALL RD	North	15/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	8		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V Re	Ith of /eg oad les	of V	nber Nat eg yers		ent of Veg		mber of ecies		sence /eeds	al		Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280052	4	8.55	14.80	MCDOWALL RD	North	15/11/06	s.bright	20	1	1	2	2	1	1	2	2	2	2	0	0	8		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280053	1	0.00	3.58	HODGSON RD	East	10/11/06	s.bright	20	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280053	2	3.58	5.15	HODGSON RD	East	10/11/06	s.bright	20	1	1	2	2	2	2	2	2	2	2	2	2	12	12	
4280062	1	0.00	0.90	LANE RD	West	10/11/06	s.bright	20	1	1	2	2	1	1	1	1	1	1	0	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280062	2	0.90	1.70	LANE RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	8		OATS_RADISH_CAPEWEED HABITAT_TREES
4280062	3	1.70	2.20	LANE RD	West	10/11/06	s.bright	20	0	0	2	2	0	0	0	0	1	1	0	0	5		OATS_RADISH_CAPEWEED ONION_WEED HABITAT_TREES
4280062	4	2.20	4.60	LANE RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	2	2	0	0	8		OATS_RADISH_CAPEWEED
4280063	1	0.00	1.50	GROSSER RD	North	20/11/06	pg	40	3	1	2	2	2	1	2	2	2	2	1	1	9	10	
4280063	2	1.50	2.80	GROSSER RD	North	20/11/06	pg	40	3	1	2	2	2	1	2	2	2	2	1	1	9	10	
4280063	3	2.80	3.60	GROSSER RD	North	20/11/06	pg	40	3	1	2	2	2	1	2	1	2	2	1	2	9	10	HABITAT_TREES
4280063	4	3.60	4.10	GROSSER RD	North	20/11/06	pg	40	3	1	2	2	2	1	2	2	2	2	1	1	9	10	
4280064	1	0.50	2.20	ELSEWHERE RD	West	19/11/06	pg	40	1	1	2	2	2	2	1	1	2	2	2	2	10	10	HABITAT_TREES
4280064	2	2.20	2.50	ELSEWHERE RD	West	19/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	2	2	9	9	HABITAT_TREES
4280064	3	2.50	3.00	ELSEWHERE RD	West	19/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	2	2	11	11	HABITAT_TREES
4280064	4	3.00		ELSEWHERE RD			. •	40	1	1	2	2	2	1	2	1	2	2	2	1	11	9	HABITAT_TREES
4280064	5	3.30		ELSEWHERE RD			. •	40	1	1	2	1	2	1	1	1	2	2	2	1	11		HABITAT_TREES
4280064				ELSEWHERE RD			. •	40	1	1	2	2	1	1	1	1	2	2	2	2	10		HABITAT_TREES
4280064	7	4.60		ELSEWHERE RD			. •	40	1	1	2	2	2	2	1	1	2	2	1	1	9	10	
4280064				ELSEWHERE RD			. •	40	1	1	2	1	1	1	1	0	2	2	1	0	8	6	HABITAT_TREES
4280064	9	5.20		ELSEWHERE RD				40	1	1	2	2	1	1	1	1	2	2	1	1	8	9	
4280064		5.90		ELSEWHERE RD				40	1	1	2	2	2	2	2	2	2	2	1	2	10	10	
4280064		7.80				19/11/06		40	1	1	2	2	2	2	2	2	2	2	2	2	11	10	HABITAT_TREES
4280064		8.80		ELSEWHERE RD				40	1	1	2	2	1	1	1	1	2	2	2	2	10		HABITAT_TREES
4280064				ELSEWHERE RD				40	1	1	2	2	1	1	1	1	2	2	2	1	10		HABITAT_TREES
4280064		9.50				19/11/06	. •	40	1	1	2	2	1	1	1	1	2	2	1	1	9	9	
4280064	15	9.80	10.00	ELSEWHERE RD	West	19/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	2	1	10	9	HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	R R	Ith of /eg oad les	of V	mber Nat ′eg yers		ent of Veg		mber of ecies		sence /eeds	а		Conse	idside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280065	1	0.00	5.52	SMITH RD	North	10/11/06	s.bright	20	2	3	2	2	2	2	2	2	2	2	2	2	11	10	
4280065	2	5.52	9.94	SMITH RD	North	10/11/06	s.bright	20	0	2	2	2	2	2	2	2	2	2	2	2	11	10	
4280065	3	9.94	10.76	SMITH RD	North	10/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280066	1	0.00	0.50	POOLE RD	East	14/11/06	s.bright	20	0	0	2	2	1	1	2	2	2	2	1	1	9	10	OATS_RADISH_CAPEWEED HABITAT_TREES
4280066	2	0.50	1.50	POOLE RD	East	14/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	7	7	OATS_RADISH_CAPEWEED
4280066	3	1.50	2.00	POOLE RD	East	14/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	0	0	10	10	HABITAT_TREES
4280066	4	2.00	4.50	POOLE RD	East	14/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	0	1	10	11	
4280067	1	0.00	2.20	BARNETT RD	West	10/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	1	7	7	OATS_RADISH_CAPEWEED HABITAT_TREES
4280067	2	2.20	4.00	BARNETT RD	West	10/11/06	s.bright	20	0	0	2	2	2	2	1	1	2	2	0	1	9	9	OATS_RADISH_CAPEWEED HABITAT_TREES
4280067	3	4.00	7.70	BARNETT RD	West	10/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	1	1	10	10	OATS_RADISH_CAPEWEED HABITAT_TREES
4280069	1	0.00	0.90	WAHLSTEN RD	North	2/11/06	s.bright	20	0	3	2	2	1	1	1	1	0	1	1	1	7	8	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280069	2	0.90	1.70	WAHLSTEN RD	North	2/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	8	8	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280069	3	1.70	3.10	WAHLSTEN RD	North	2/11/06	s.bright	20	3	0	2	2	2	2	2	2	2	2	2	2	10	11	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280069				WAHLSTEN RD			s.bright	20	0	0	2	2	1	1	1	1	1	1	1	2	7	8	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280069				WAHLSTEN RD			s.bright	20	0	0	1	1	1	1	0	0	0	0	2	1	5	4	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280069	6	5.20	5.80	WAHLSTEN RD			s.bright	20	0	0	2	2	1	1	0	0	1	1	2	2	8	8	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED HABITAT_TREES
4280070				PITT RD			sara bright	20	0	0	2	2	1	1	1	1	2	2	2	2	4	4	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED
4280070	2	0.25	2.75	PITT RD	North		sara bright	20	0	0	2	2	2	2	2	2	2	2	1	1	11	11	AFRICAN_LOVEGRASS OATS_RADISH_CAPEWEED

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V Re	Ith of /eg oad les	of V	nber Nat 'eg yers		ent of Veg		mber of ecies		sence /eeds	a	ue as Biol ridor	Conse	idside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280071	1	0.77	2.77	GRAHAM RD	East	10/11/06	s.bright	20	3	0	2	2	2	2	2	2	2	2	2	2	10	11	OATS_RADISH_CAPEWEED HABITAT_TREES
4280071	2	2.77	4.07	GRAHAM RD	East	10/11/06	s.bright	20	0	1	2	2	1	1	1	1	2	2	2	2	9	9	
4280071	3	4.07	6.37	GRAHAM RD	East	10/11/06	s.bright	20	З	1	2	2	2	2	2	2	2	2	2	2	10	11	
4280072	1	0.00	3.30	WARRALAKIN NORTH RD	North	16/11/06	s.bright	20	0	1	2	2	2	2	2	2	2	2	0	0	10	10	OATS_RADISH_CAPEWEED
4280072	2	3.30	4.50	WARRALAKIN NORTH RD	North East	16/11/06	s.bright	20	0	0	2	2	2	2	2	2	2	2	0	0	8	10	OATS_RADISH_CAPEWEED
4280072	3	4.50	6.40	WARRALAKIN NORTH RD	North East	16/11/06	s.bright	20	3	3	2	2	2	2	2	2	2	2	2	2	10	10	OATS_RADISH_CAPEWEED
4280073			2.40	DUNCAN RD		18/11/06		40	1	1	2	2	2	1	2	1	2	2	2	1	12	9	PATERSONS_CURSE HABITAT_TREES
4280073		2.40	3.80	DUNCAN RD		18/11/06	. •	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	PATERSONS_CURSE
4280073				DUNCAN RD		18/11/06		40	1	0	1	1	1	1	0	0	2	2	0	0	6	6	PATERSONS_CURSE
4280073	4	4.00	4.40	DUNCAN RD	North	18/11/06	pg	40	1	1	2	2	2	2	2	2	2	2	1	1	11	11	
4280074			0.40	RD		18/11/06		20	0	0	2	2	2	2	2	2	2	2	1	1	9	10	
4280074	2		2.40	LAKE DEBORAH RD		18/11/06	pg	20	0	0	2	2	2	2	2	2	2	2	1	1	9	10	
4280074	3	2.40	3.20	LAKE DEBORAH RD		18/11/06		40	1	1	2	2	2	2	2	2	2	2	2	2	10	10	
4280074	4	3.20	3.60	LAKE DEBORAH RD				40	1	1	2	2	2	1	2	1	2	2	2	1	10	9	
4280074	5	3.60	4.10	LAKE DEBORAH RD	East	18/11/06	pg	40	1	1	2	2	2	1	2	1	2	2	1	1	9	9	
4280074	6	4.10	4.80	LAKE DEBORAH RD	East	18/11/06	pg	40	1	1	2	2	2	1	2	1	2	2	2	1	10	9	HABITAT_TREES
4280074	7	4.80	5.80	LAKE DEBORAH RD	East	18/11/06	pg	40	1	1	2	2	1	1	2	2	2	2	2	2	9	11	
4280075	1	0.00	0.90	RD	West	18/11/06	pg	40	3	0	2	2	1	1	1	1	2	2	1	1	7	9	PATERSONS_CURSE
4280075	2	0.90	2.00	HUNTER WEST RD	West	18/11/06	pg	40	1	1	2	2	1	1	1	1	2	2	1	1	9	9	PATERSONS_CURSE
4280075	3	2.00	2.50	HUNTER WEST RD	West	18/11/06	pg	40	1	1	2	2	2	2	1	1	2	2	1	1	10	10	PATERSONS_CURSE OATS_RADISH_CAPEWEED

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	N R	Ith of /eg oad les	of V	nber Nat ′eg yers		ent of t Veg		mber of ecies		sence Veeds	а	ue as Biol ridor	Cons	adside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280075	4	2.50	5.60	HUNTER WEST RD		18/11/06		40	1	1	2	2	2	2	2	2	2	2	2	2	11	12	PATERSONS_CURSE OATS_RADISH_CAPEWEED HABITAT_TREES
4280077	1	0.00	1.30	CARR RD	East	23/10/06	pg	20	1	0	2	2	2	1	1	1	2	2	2	1	11	9	AFRICAN_LOVEGRASS PATERSONS_CURSE
4280078	1	0.00	0.60	GEELAKIN RD	East	18/11/06	pg	20	0	0	2	2	2	2	1	1	2	2	1	1	10	10	
4280078	2	0.60	0.90	GEELAKIN RD	East	18/11/06	pg	20	0	0	2	2	2	1	1	1	2	2	2	1	11	9	HABITAT_TREES
4280078	3	0.90	1.20	GEELAKIN RD	East	18/11/06	pg	20	0	0	2	2	2	1	1	1	2	2	1	1	10	9	
4280078	4	1.20	1.70	GEELAKIN RD	East	18/11/06	pg	20	0	0	2	2	2	2	2	2	2	2	1	1	11	11	
4280078	5	1.70	1.90	GEELAKIN RD	East	18/11/06	pg	20	0	0	2	2	2	2	2	2	2	2	1	1	11	11	
4280078	6	1.90	3.00	GEELAKIN RD	East	18/11/06	pg	20	0	0	2	2	2	2	2	2	2	2	1	1	11	11	
4280078	7	3.00	5.00	GEELAKIN RD	East	18/11/06	pg	20	0	0	2	2	2	2	2	2	2	2	1	1	11	11	
4280079	1	0.00	1.10	SETTINERI RD	East	23/10/06	pg	20	0	0	1	1	0	0	0	0	0	0	1	1	4	4	OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280079	2	1.10	1.40	SETTINERI RD	East	23/10/06	pg	20	0	0	0	0	0	0	0	0	0	0	0	0	2	1	OATS_RADISH_CAPEWEED
4280079	3	1.40	2.00	SETTINERI RD	East	23/10/06	pg	20	0	0	2	2	1	1	1	1	2	2	1	1	9	8	OATS_RADISH_CAPEWEED
4280079	4	2.00	2.40	SETTINERI RD	East	23/10/06	pg	20	0	0	1	1	1	1	1	1	2	2	1	1	8	7	OATS_RADISH_CAPEWEED
4280079	5	2.40	2.60	SETTINERI RD	East	23/10/06	pg	20	0	0	1	1	1	1	0	0	2	2	0	1	6	6	
4280080	1	0.00	0.80	DELLA BOSCA RD	East	17/10/06	pg	20	3	3	2	2	2	2	1	1	2	2	2	2	9	9	
4280080	2	0.80	1.40	DELLA BOSCA RD	East	17/10/06	pg	20	3	3	2	2	2	2	1	1	2	2	1	1	8	8	
4280080	3	1.40	1.70	DELLA BOSCA RD	East	17/10/06	pg	20	1	3	2	2	2	2	1	1	2	2	1	1	10	8	
4280080	4	1.70	1.90	DELLA BOSCA RD	East	17/10/06	pg	20	1	0	2	2	2	2	1	1	2	2	1	1	10	10	
4280080	5	1.90		DELLA BOSCA RD	East	17/10/06	pg	20	0	0	0	0	0	0	0	0	0	0	0	0	2	2	FOUNTAIN_GRASS
4280080	6	2.60	4.10	DELLA BOSCA RD	East	17/10/06	pg	20	0	0	1	1	1	1	1	1	2	2	1	1	8	7	FOUNTAIN_GRASS
4280080	7	4.10	4.40	DELLA BOSCA RD	East	17/10/06	pg	20	0	0	2	2	1	1	1	1	1	1	1	1	8	8	
4280081	1	0.00	0.80	BOUNDARY RD	North	17/10/06	pg	20	3	3	2	2	2	2	1	1	2	2	1	1	8	8	OATS_RADISH_CAPEWEED
4280081	2	0.80	2.30	BOUNDARY RD	North	17/10/06	pg	20	0	3	2	2	1	2	0	1	1	2	1	1	7	8	OATS_RADISH_CAPEWEED

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	of Rd Res	V Re R	dth of /eg oad Res	of V La	mber Nat 'eg yers	Nat	ent of t Veg	Spe	of ecies	of W	/eeds	a l Cor	Biol ridor	Conse Value	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280083	1	0.00		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	2	2	2	2	2	2	2	1	11	11	
4280083		2.00		KOORDA- BULLFINCH RD		20/11/06		40	1	0	2	2	2	2	2	2	2	2	1	1	11	11	
4280083	3	2.59		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	2	2	1	2	1	2	2	1	1	11	9	
4280083	4	2.88		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	2	2	2	2	1	2	2	1	1	10		OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280083	5	3.27		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	2	1	2	1	2	1	2	1	1	8		OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280083	6	3.76		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	1	1	1	0	0	0	0	0	1	1	0	3	4	OATS_RADISH_CAPEWEED
4280083	7	4.35		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	3	1	2	0	1	0	1	0	1	1	1	4		OATS_RADISH_CAPEWEED PATERSONS_CURSE SAFFRON_THISTLE HABITAT_TREES
4280083	8	5.14		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	3	2	2	0	1	0	1	0	1	1	0	5		OATS_RADISH_CAPEWEED HABITAT_TREES
4280083	9	5.93		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	3	2	2	0	1	0	1	0	1	1	2	5		OATS_RADISH_CAPEWEED HABITAT_TREES
4280083	10	6.92		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	3	1	1	0	0	0	0	1	1	1	1	5		OATS_RADISH_CAPEWEED HABITAT_TREES
4280083		_		KOORDA- BULLFINCH RD		20/11/06		40	0	3	2	2	1	2	1	1	1	2	0	1	7	9	OATS_RADISH_CAPEWEED
4280083				KOORDA- BULLFINCH RD		20/11/06		40	0	3	2	2	1	1	1	1	2	2	1	1	9	8	OATS_RADISH_CAPEWEED
4280083				KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	3	2	2	1	1	0	0	1	1	0	0	6	5	OATS_RADISH_CAPEWEED
4280083	14	8.78		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	3	1	1	0	0	0	0	0	0	0	0	3		OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280083				KOORDA- BULLFINCH RD		20/11/06		40	0	3	2	2	1	1	1	1	2	2	2	2	8		OATS_RADISH_CAPEWEED PATERSONS_CURSE HABITAT_TREES
4280083	16	9.46		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	0	1	0	0	0	0	0	0	2	0	1	1		OATS_RADISH_CAPEWEED PATERSONS_CURSE HABITAT_TREES

ROAD #	SECT #	OD Start	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of /eg oad les	of V	mber Nat 'eg yers		ent of Veg				sence /eeds	al		Cons	ndside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280083	17	9.65		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	0	2	0	2	0	2	2	2	0	10		OATS_RADISH_CAPEWEED HABITAT_TREES
4280083	18	10.04	10.23	KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	2	1	2	1	2	2	1	1	9		PATERSONS_CURSE OATS_RADISH_CAPEWEED SAFFRON_THISTLE
4280083	19	10.23	10.62	KOORDA- BULLFINCH RD	East	20/11/06	pg	40	0	0	1	1	0	0	0	0	0	0	0	0	3		PATERSONS_CURSE OATS_RADISH_CAPEWEED SAFFRON_THISTLE
4280083	20	10.62	11.51	KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	2	1	1	1	0	2	1	2	1	10		PATERSONS_CURSE OATS_RADISH_CAPEWEED HABITAT_TREES
4280083	21	11.51		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	1	1	1	1	0	2	2	1	0	9		PATERSONS_CURSE OATS_RADISH_CAPEWEED
4280083	22	12.10		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	1	2	1	1	0	1	2	1	0	1	5		SAFFRON_THISTLE OATS_RADISH_CAPEWEED
4280083	23	12.89	13.18	KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	0	1	0	2	1	0	1	7		SAFFRON_THISTLE OATS_RADISH_CAPEWEED
4280083				KOORDA- BULLFINCH RD		20/11/06		40	3	0	2	2	1	0	1	0	2	1	1	0	8		SAFFRON_THISTLE OATS_RADISH_CAPEWEED
4280083	25	13.57		KOORDA- BULLFINCH RD		20/11/06		40	3	0	2	1	1	0	1	0	1	1	1	0	7		SAFFRON_THISTLE OATS_RADISH_CAPEWEED
4280083	26	14.06	14.55	KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	1	1	0	1	0	2	0	0	0	7		SAFFRON_THISTLE OATS_RADISH_CAPEWEED
4280083	27	14.55		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	1	1	0	1	0	2	1	2	0	10		SAFFRON_THISTLE HABITAT_TREES
4280083	28	15.24		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	1	1	0	1	0	2	2	1	0	9		SAFFRON_THISTLE HABITAT_TREES
4280083	29	16.33		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	3	1	2	1	2	1	2	1	2	0	2	6		SAFFRON_THISTLE ONION_WEED PATERSONS_CURSE HABITAT_TREES
4280083	30	16.92		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	1	0	2	2	1	1	2	1	2	2	1	1	10	9	SAFFRON_THISTLE
4280083			_	KOORDA- BULLFINCH RD		20/11/06		40	1	0	2	1	2	0	2	0	2	2	1	0	11	5	
4280083	32	17.70		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	1	2	2	1	1	2	1	2	2	2	1	10	8	HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of 'eg oad les	of V	mber Nat ′eg yers		ent of Veg		mber of ecies		sence /eeds	a	ue as Biol rridor	Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280083	33	18.19		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	1	2	2	2	2	2	2	2	2	1	1	10	10	
4280083	34	18.58		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	1	2	2	1	1	1	1	2	2	1	1	8	8	
4280083	35	19.07		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	1	1	1	2	2	2	1	9	8	HABITAT_TREES
4280083	36	19.76		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	3	2	2	1	1	1	1	2	2	2	2	9	10	HABITAT_TREES
4280083	37	20.05		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	3	2	2	1	1	1	1	2	2	2	2	9	8	HABITAT_TREES
4280083	38	20.94		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	3	2	2	1	1	1	1	2	2	1	1	8	7	
4280083	39	21.13		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	1	0	1	0	1	0	2	2	1	0	7		OATS_RADISH_CAPEWEED HABITAT_TREES
4280083	40	21.72		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	3	2	2	1	1	2	1	2	2	2	2	10	8	OATS_RADISH_CAPEWEED HABITAT_TREES
4280083	41	23.31		KOORDA- BULLFINCH RD		20/11/06		40	3	0	2	0	2	0	2	0	2	2	1	0	10	3	
4280083	42	24.00		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	0	1	0	2	2	1	1	8	6	
4280083	43	24.59		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	0	0	0	2	2	0	0	6		SAFFRON_THISTLE HABITAT_TREES
4280083	44	25.28		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	0	1	0	1	0	2	0	2	0	9		SAFFRON_THISTLE HABITAT_TREES
4280083	45	25.97		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	1	1	0	1	0	2	1	1	0	8		SAFFRON_THISTLE OATS_RADISH_CAPEWEED
4280083	46	26.66		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	1	1	0	2	2	0	0	7	6	ONION_WEED
4280083	47	27.25		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	0	0	0	0	1	1	1	1	5	5	AFRICAN_LOVEGRASS
4280083	48	27.54		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	1	1	1	2	2	1	1	8	8	AFRICAN_LOVEGRASS
4280083	49	28.13		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	2	1	2	1	2	2	1	1	10	8	
4280083	50	28.42		KOORDA- BULLFINCH RD		20/11/06		40	3	0	2	2	2	1	1	1	2	2	1	1	9	8	
4280083	51	29.01		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	1	1	1	2	2	1	1	8	8	

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	dth of /eg oad Res	of V	mber Nat ′eg yers		ent of Veg		mber of ecies		sence Veeds	а	ue as Biol ridor	Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280083	52	29.90		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	0	1	0	2	2	1	1	8	7	HABITAT_TREES
4280083	53	30.19		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	1	1	1	2	2	1	1	8	9	
4280083	54	30.48		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	2	1	2	1	2	2	1	1	10	9	
4280083	55	31.27		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	1	1	1	2	2	1	1	8	9	
4280083	56	31.56		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	1	1	0	1	0	2	2	1	0	8	5	HABITAT_TREES
4280083	57	31.85		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	2	0	2	0	2	2	2	1	11	7	HABITAT_TREES
4280083	58	32.64		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	2	1	2	1	2	2	1	1	10	9	
4280083	59	32.93		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	1	0	1	0	2	2	2	1	9	7	HABITAT_TREES
4280083	60	33.22		KOORDA- BULLFINCH RD	East	20/11/06	pg	40	3	0	2	2	2	2	2	1	2	2	1	1	10	10	
4280084	1	0.00	4.47	WARRALAKIN RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	0	6		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
4280084	2	4.47	12.75	WARRALAKIN RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	2	2	8		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
4280084	3	12.75	13.82	WARRALAKIN RD	North	16/11/06	s.bright	20	0	0	1	2	0	1	0	1	0	1	0	2	3	9	OATS_RADISH_CAPEWEED HABITAT_TREES
4280084	4	13.82		WARRALAKIN RD	North	16/11/06	s.bright	20	0	0	2	2	0	0	1	1	0	0	0	0	4	5	OATS_RADISH_CAPEWEED HABITAT_TREES
4280084	5	16.49		WARRALAKIN RD	North	16/11/06	s.bright	20	0	0	1	2	0	1	0	1	0	1	0	1	2	8	OATS_RADISH_CAPEWEED HABITAT_TREES
4280084	6	19.86	26.24	WARRALAKIN RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	0	1	6		OATS_RADISH_CAPEWEED HABITAT_TREES
4280084	7	26.24	35.51	WARRALAKIN RD	North	16/11/06	s.bright	20	1	1	2	2	1	1	2	2	2	2	1	2	9	10	OATS_RADISH_CAPEWEED HABITAT_TREES
4280084	8	35.51	39.58	WARRALAKIN RD	North	16/11/06	s.bright	20	0	0	2	2	1	1	1	1	1	1	1	2	8		OATS_RADISH_CAPEWEED ONION_WEED HABITAT_TREES

ROAD #	SECT #		OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V R	Ith of /eg oad les	of V	mber Nat 'eg yers		ent of t Veg		mber of ecies		sence /eeds	а	ue as Biol ridor	Conse	dside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280085	1	0.00	0.96	WESTONIA RD	North	17/10/06	pg	20	0	0	2	0	2	0	1	0	2	0	2	0	11		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS
42800852	2	0.96	1.91	WESTONIA RD	North	17/10/06	pg	20	0	0	2	1	2	1	1	0	2	0	2	2	11		OATS_RADISH_CAPEWEED PATERSONS_CURSE
4280085	3	1.91	3.07	WESTONIA RD	North	17/10/06	pg	20	0	0	2	2	1	1	1	1	2	2	2	2	10	10	OATS_RADISH_CAPEWEED
4280085	4	3.07	4.03	WESTONIA RD	North	17/10/06	pg	20	0	0	2	2	1	1	1	1	1	1	2	2	9	9	OATS_RADISH_CAPEWEED
4280085	5	4.03	5.59	WESTONIA RD	North	17/10/06	pg	20	0	0	2	2	2	2	1	1	2	2	2	2	11	11	
4280085	6	5.59	7.94	WESTONIA RD	North	17/10/06	pg	20	0	0	2	2	2	2	1	1	2	2	2	2	10	10	
4280085	7	7.94	8.40	WESTONIA RD	North	17/10/06	pg	20	0	0	2	2	2	2	1	1	2	2	2	2	9	10	
4280086	1	0.00	0.20	HOBBS RD	East	20/11/06		40	1	1	2	2	1	2	1	2	2	2	1	1	7	11	
42800862		0.20	1.00	HOBBS RD	East	20/11/06		40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
4280086		1.00	1.30	HOBBS RD	East	20/11/06		40	3	1	2	2	2	2	2	2	2	2	1	1	9	11	
42800864		1.30	1.90	HOBBS RD	East	20/11/06		40	3	1	2	2	2	2	2	2	2	2	1	1	9	9	
4280087			0.30	JONES RD		20/11/06		40	1	1	2	2	0	0	1	1	2	2	1	1	8	8	
4280087			0.60	JONES RD		20/11/06	. •	40	1	1	2	2	1	1	1	1	2	2	1	0	9	8	HABITAT_TREES
4280087	-		0.90	JONES RD		20/11/06	10	40	1	1	2	2	1	1	1	1	2	2	1	1	9	9	HABITAT_TREES
4280087		0.90	1.70	JONES RD		20/11/06		40	1	1	2	2	1	1	0	0	2	2	1	1	8	8	HABITAT_TREES
4280087	-	1.70	1.90	JONES RD		20/11/06	10	40	1	1	2	2	1	1	1	1	2	2	2	2	10	10	HABITAT_TREES
4280089	1	0.00	0.51	SHREEVE RD	North	2/11/06	sb	20	0	0	2	2	1	1	1	1	1	0	1	2	8		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
42800892	2	0.51	1.21	SHREEVE RD	North	2/11/06	sb	20	0	0	1	1	1	1	1	1	0	0	0	0	5		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS PATERSONS_CURSE
4280089;	3	1.21	1.82	SHREEVE RD	North	2/11/06	sb	20	0	0	2	2	1	1	1	1	1	1	1	1	8	8	OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES
42800894	4	1.82	2.42	SHREEVE RD	North	2/11/06	sb	20	0	0	0	2	0	1	0	1	0	1	0	1	2		OATS_RADISH_CAPEWEED AFRICAN_LOVEGRASS HABITAT_TREES

ROAD #	SECT #	-	OD Finish	ROAD NAME	Dir	Date	Observer	Width of Rd Res	V Re	Ith of eg bad es	of V	nber Nat 'eg yers		ent of Veg	(/eeds	al		Cons	idside ervation e (0-12)	Final Overlays (Listed if Present)
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
4280094	1	0.00	1.30	BROWN RD	West	18/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	1	1	9	9	
4280094	2	1.30	2.60	BROWN RD	West	18/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	2	2	10	10	
4280094	3	2.60	4.90	BROWN RD	West	18/11/06	pg	40	3	3	2	2	2	2	2	2	2	2	1	1	9	9	

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APPENDIX 3

Road names and lengths: Shire of Westonia

(Source- Main Roads WA 2004)

Road # (MRWA)	Road name	Road length (km)
4280003	CARRABIN SIDING RD	2.17
4280004	WALGOOLAN SOUTH RD	15.95
4280005	WARRACHUPPIN RD	32.40
4280006	CARRABIN SOUTH RD	17.85
4280007	BOODAROCKIN RD	39.02
4280008	GOLDFIELDS RD	16.75
4280009	STONEMAN RD	11.38
4280010	BEGLEY RD	33.56
4280011	MAXFIELD RD	28.70
4280012	DADDOW RD	26.84
4280013	MCPHARLIN RD	6.60
4280014	DAY RD	5.15
4280015	ECHO VALLEY RD	35.87
4280016	LEACHES RD	21.47
4280018	GEORGE RD	18.67
4280019	4 MILE GATE RD	6.12
4280020	6 MILE GATE RD	4.35
4280021	WARRACHUPPIN NORTH RD	18.35
4280022	HENDERSON RD	9.35
4280023	CLOTHIER RD	9.65
4280025	RABBIT PROOF FENCE RD	103.95
4280030	MASEFIELD RD	14.48
4280031	ELACH BUTTING RD	24.62
4280032	BOODAROCKIN NORTH RD	19.00
4280033	HUNTER RD	11.37
4280034	FARINA RD	16.26
4280035	WEBB RD	9.86
4280036	LINDLEY RD	6.92
4280037	WARDELL RD	4.01
4280038	EGG ROCK RD	2.27
4280040	CAPITO RD	9.00
4280041	LOGAN RD	4.09
4280042	BENNETT RD	4.00
4280044	CREWS RD	4.85
4280045	HALL RD	4.00
4280046	STRAHAN RD	4.83
4280047	CORSINI RD	6.76
4280048	ENGLISH RD	11.91
4280050	MORRISON RD	19.20
4280052	MCDOWALL RD	14.80
4280053	HODGSON RD	5.15
4280054	JASPER ST	0.72
4280055	DIORITE ST	0.72
4280056	PYRITES ST	0.35
4280057	QUARTZ ST	0.54
4280058	KAOLIN ST	0.64

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4280059	GOLD ST	0.64
4280060	CEMENT ST	1.10
4280061	WOLFRAM ST	1.06
4280062	LANE RD	4.50
4280063	GROSSER RD	4.20
4280064	ELSEWHERE RD	9.66
4280065	SMITH RD	10.95
4280066	POOLE RD	4.62
4280067	BARNETT RD	7.86
4280069	WAHLSTEN RD	5.89
4280070	PITT RD	2.90
4280071	GRAHAM RD	6.20
4280072	WARRALAKIN NORTH RD	6.47
4280073	DUNCAN RD	4.67
4280074	LAKE DEBORAH RD	6.60
4280075	HUNTER WEST RD	5.65
4280077	CARR RD	2.40
4280078	GEELAKIN RD	5.00
4280079	SETTINERI RD	2.80
4280080	DELLA BOSCA RD	4.60
4280081	BOUNDARY RD	2.60
4280082	FOX ST	0.80
4280083	WYALKATCHEM-SOUTHERN CROSS RD	34.96
4280084	WARRALAKIN RD	39.58
4280085	WESTONIA RD	8.40
4280086	HOBBS RD	1.95
4280087	JONES RD	1.98
4280088	JOCELYN RD	2.62
4280089	SHREEVE RD	2.42

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APPENDIX 4

Flora species in the Shire of Westonia

(Source- WA 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 acutata Acacia aestivalis Acacia ancistrophylla var. ancistrophylla Acacia ancistrophylla var. perarcuata P3 Acacia andrewsii Acacia anfractuosa Acacia ascendens P2 Acacia assimilis subsp. assimilis Acacia beauverdiana Acacia chrysella Acacia colletioides Acacia consanguinea Acacia coolgardiensis subsp. coolgardiensis Acacia coolgardiensis Acacia cracentis Acacia crenulata P3 Acacia cylindrica P3 Acacia deficiens Acacia densiflora Acacia enervia subsp. enervia Acacia enervia subsp. explicata Acacia ericksoniae Acacia erinacea Acacia fauntlerovi Acacia filifolia P3 Acacia flavipila var. flavipila Acacia formidabilis P3 Acacia glutinosissima Acacia graniticola Acacia hemiteles Acacia heteroneura var. heteroneura Acacia heteroneura var. jutsonii Acacia iennerae Acacia jibberdingensis Acacia lasiocalyx Acacia leptopetala Acacia ligulata Acacia lobulata R Acacia longispinea Acacia mackeyana Acacia merrallii Acacia murrayana Acacia neurophylla subsp. erugata Acacia nigripilosa subsp. nigripilosa Acacia nyssophylla Acacia prainii Acacia ramulosa var. ramulosa Acacia resinimarginea Acacia restiacea Acacia rigens Acacia rossei Acacia saligna subsp. lindleyi

Acacia sessilispica Acacia sp. Merredin (B.R. Maslin 586) Acacia sp. narrow phyllode (B.R. Maslin 7831) Acacia sp. P69 (W.E. Blackall 3754) Acacia steedmanii subsp. steedmanii Acacia tetragonophylla Acacia ? uncinella Acacia undosa P3 Acacia verricula Acacia yorkrakinensis subsp. acrita Acaulon integrifolium Actinobole uliginosum Actinotus humilis Actinotus superbus Adenanthos argyreus *Aira cupaniana Allocasuarina acutivalvis subsp. acutivalvis Allocasuarina acutivalvis subsp. acutivalvis / prinsepiana Allocasuarina acutivalvis Allocasuarina campestris Allocasuarina corniculata Allocasuarina sp. Allocasuarina spinosissima Alyogyne hakeifolia Alyxia buxifolia *Amaranthus albus Amphibromus nervosus Amphipogon caricinus Amyema gibberula var. tatei *Anagallis arvensis var. caerulea Angianthus tomentosus Anthocercis genistoides Aotus tietkensii Aphelia brizula Argyroglottis turbinata Arthropodium curvipes Arthropodium sp. Asterella drummondii Asteridea athrixioides Astroloma serratifolium Astus subroseus Atriplex ? bunburyana Atriplex hymenotheca Atriplex nummularia subsp. spathulata Atriplex paludosa subsp. baudinii Atriplex quadrivalvata var. quadrivalvata Atriplex sp. Austrodanthonia acerosa Austrodanthonia caespitosa Austrodanthonia occidentalis Austrodanthonia setacea Austrodanthonia sp. Austrostipa acrociliata Austrostipa elegantissima

Austrostipa nitida Austrostipa platychaeta Austrostipa scabra Austrostipa sp. Austrostipa variabilis Baeckea crispiflora Baeckea elderiana Baeckea muricata Baeckea recurva Baeckea rosea Baeckea sp. Baeckea sp. Bencubbin-Koorda (M.E. Trudgen 5421) Baeckea sp. Elsewhere Road (M.E. Trudgen 5420) P3 Baeckea sp. Walyahmoning (M.E. Trudgen 5412) Balaustion pulcherrimum Banksia elderiana Barbula calycina Barbula crinita Beaufortia micrantha var. puberula Beaufortia sp. Beyeria brevifolia var. robustior Blennospora drummondii Boronia coerulescens Boronia ternata var. ternata Boronia ternata Borya constricta Borya laciniata Borya sphaerocephala Bossiaea sp. Bossiaea walkeri Brachychiton gregorii Brachyscome ciliaris Brachyscome iberidifolia Brachyscome perpusilla Brachyscome pusilla Brachyscome sp. Brachysola coerulea *Briza minor *Bromus rubens *Bromus sp. Brunonia sp. Goldfields (K.R. Newbey 6044) Bryum argenteum Bursaria occidentalis Caladenia dimidia Caladenia incensa Caladenia mesocera Caladenia pachychila Caladenia paradoxa Caladenia aff. polychroma Caladenia radialis Caladenia roei Caladenia saccharata Calandrinia calyptrata Calandrinia corrigioloides Calandrinia eremaea Calandrinia aff. eremaea Calandrinia granulifera Calandrinia kalanniensis P2 Calandrinia lehmannii Calandrinia porifera P3 Calandrinia sp. Blackberry (D.M. Porter 171)

Calandrinia sp. ridged papillate (M. Hislop & E. Hudson MH161) Callistemon phoeniceus Callitris canescens Callitris columellaris Callitris preissii Caloplaca sp. Calothamnus gilesii Calothamnus quadrifidus Calothamnus sp. Calothamnus tuberosus Calotis hispidula Calycopeplus paucifolius Calytrix leschenaultii Calytrix plumulosa P3 Calytrix violacea Campylopus bicolor var. bicolor Campylopus flindersii Campylopus introflexus *Carrichtera annua Cassia sp. Cassytha glabella forma dispar Cassytha melantha Centaurea sp. Centrolepis aristata Centrolepis strigosa subsp. rupestris Chamaexeros fimbriata Chamelaucium ciliatum Chamelaucium pauciflorum subsp. pauciflorum Chamelaucium pauciflorum subsp. thryptomenioides Chamelaucium pauciflorum Chamelaucium sp. Cheilanthes adiantoides Cheilanthes distans Cheilanthes lasiophylla Cheilanthes sp. Cheiranthera filifolia var. filifolia Chenopodium melanocarpum Chlaenosciadium gardneri *Chondrilla juncea Chrvsitrix distigmatosa Chthonocephalus pseudevax Cladia aggregata Clematis delicata *Cleretum papulosum subsp. papulosum *Cleretum papulosum Codonocarpus cotinifolius Comesperma drummondii Comesperma integerrimum Comesperma volubile Commersonia stowardii Conospermum stoechadis subsp. stoechadis Conostylis bealiana Convolvulus remotus *Cotula bipinnata Crassula closiana Crassula colorata var. acuminata Crassula colorata var. colorata Crassula exserta Crassula extrorsa *Crassula natans var. minus Cratystylis subspinescens Crossidium davidai Cryptandra apetala var. apetala

Cryptandra minutifolia subsp. minutifolia Cryptandra myriantha Cryptandra wilsonii Cyanicula amplexans Cyanicula ashbyae Cyanostegia angustifolia Cyanostegia microphylla Cymbopogon ambiguus Cymbopogon sp. Dampiera eriocephala Dampiera haematotricha subsp. dura Dampiera juncea Dampiera luteiflora Dampiera sp. Dampiera stenostachya Dampiera tenuicaulis var. curvula Dampiera wellsiana Darwinia halophila Darwinia purpurea Darwinia sp. Chiddarcooping (S.D. Hopper 6944) P4 Darwinia thryptomenioides Daucus glochidiatus Daviesia cf. longifolia Daviesia nematophylla Daviesia rhombifolia Daviesia rubiginosa Desmatodon sp. Dianella revoluta Dicrastylis corymbosa P3 Dicrastylis parvifolia Didymodon torquatus Diplolaena drummondii Diplolaena microcephala Diplolaena sp. Diplolaena velutina Diploschistes ocellatus Diuris aff. corymbosa Diuris corymbosa Diuris porrifolia Diuris? porrifolia Dodonaea adenophora Dodonaea bursariifolia Dodonaea caespitosa Dodonaea inaequifolia Dodonaea rigida Dodonaea viscosa subsp. angustissima Dodonaea viscosa subsp. angustissima / spatulata Dodonaea viscosa subsp. spatulata Drosera andersoniana Drosera bulbosa subsp. bulbosa Drosera macrantha subsp. macrantha Drosera moorei Drosera rupicola Drosera sp. Drosera stricticaulis Drummondita hassellii Dryandra shanklandiorum P4 Duboisia hopwoodii *Ecballium elaterium

Eccremidium arcuatum Ecdeiocolea monostachya *Emex australis Enchylaena lanata Entosthodon apophysatus Entosthodon subnudus var. subnudus Ephemerum cristatum Eremophila adenotricha P2 Eremophila caperata Eremophila clarkei Eremophila complanata P2 Eremophila decipiens subsp. decipiens Eremophila decipiens subsp. linearifolia Eremophila decipiens Eremophila drummondii Eremophila granitica Eremophila ionantha Eremophila? ionantha x scoparia Eremophila miniata Eremophila oppositifolia subsp. angustifolia Eremophila oppositifolia Eremophila phillipsii Eremophila resinosa R Eremophila scoparia Eremophila serrulata Eremophila virens R Eremophila viscida R Eriachne ovata Ericksonella saccharata Eriochiton sclerolaenoides *Erodium aureum *Erodium cicutarium Erodium crinitum Erodium cvanorum Erymophyllum ramosum subsp. ramosum Erymophyllum ramosum Eucalyptus aequioperta Eucalyptus brachycorys Eucalyptus brevipes R Eucalyptus burracoppinensis Eucalyptus caesia subsp. caesia P4 Eucalyptus caesia subsp. magna P4 Eucalyptus capillosa subsp. capillosa Eucalvptus capillosa subsp. capillosa x subangusta Eucalyptus celastroides subsp. celastroides Eucalvptus celastroides subsp. virella Eucalyptus corrugata Eucalyptus crucis subsp. crucis R Eucalyptus crucis subsp. lanceolata Eucalyptus crucis Eucalyptus aff. cylindriflora Eucalyptus densa subsp. densa Eucalyptus eremophila subsp. eremophila Eucalyptus erythronema var. erythronema Eucalyptus erythronema var. erythronema x salubris Eucalyptus ewartiana Eucalyptus flocktoniae subsp. flocktoniae Eucalyptus gracilis / yilgarnensis Eucalyptus horistes Eucalyptus kochii subsp. plenissima Eucalyptus leptophylla var. floribunda Eucalyptus aff. leptophylla Eucalyptus leptopoda subsp. leptopoda Eucalyptus longicornis Eucalyptus loxophleba subsp. lissophloia Eucalyptus melanoxylon

Eucalyptus moderata

Eucalyptus myriadena subsp. myriadena Eucalyptus myriadena Eucalyptus olivina Eucalyptus orbifolia Eucalyptus petraea Eucalyptus ravida Eucalyptus rigidula Eucalyptus salicola Eucalyptus salmonophloia Eucalyptus salubris Eucalyptus sheathiana Eucalyptus sp. Southern Goldfields (D. Nicolle & M. French DN 3652) Eucalyptus stowardii Eucalyptus subangusta subsp. cerina Eucalyptus subangusta subsp. pusilla Eucalyptus subangusta subsp. subangusta Eucalyptus tenera Eucalyptus tephroclada Eucalyptus websteriana Eucalyptus yilgarnensis Euphorbia drummondii Euryomyrtus leptospermoides P3 Euryomyrtus maidenii Exocarpos aphyllus Fissidens asplenioides Fissidens megalotis Fissidens taylorii var. taylorii Flavoparmelia rutidota Frankenia sp. Frankenia tetrapetala Galium spurium Gastrolobium floribundum Gastrolobium parviflorum Gemmabryum dichotomum Gemmabryum pachythecum Gigaspermum repens Gilberta tenuifolia Glischrocaryon aureum Glischrocaryon flavescens Glossostigma drummondii Glossostigma sp. Glossostigma trichodes Glycine clandestina Gnephosis acicularis Gnephosis drummondii Gompholobium hendersonii Gompholobium obcordatum Gonocarpus nodulosus Goodenia berardiana Goodenia helmsii Goodenia pinifolia Goodenia pusilliflora Goodenia sp. Chiddarcooping (S.D. Hopper 7055) Goodenia tripartita Goodenia watsonii subsp. watsonii Goodenia xanthosperma Granitites intangendus Grevillea acacioides Grevillea acuaria Grevillea ceratocarpa Grevillea didymobotrya subsp. didymobotrya

Grevillea eremophila Grevillea eriostachya Grevillea eryngioides Grevillea excelsior Grevillea hookeriana subsp. apiciloba Grevillea hookeriana subsp. apiciloba / digitata Grevillea hookeriana subsp. digitata Grevillea huegelii Grevillea levis Grevillea nana subsp. nana Grevillea paniculata Grevillea paradoxa Grevillea petrophiloides subsp. petrophiloides Grevillea pterosperma Grevillea sarissa subsp. sarissa Grevillea squiresiae P1 Grevillea yorkrakinensis Grimmia laevigata Guichenotia macrantha Gunniopsis glabra Gunniopsis intermedia Gunniopsis quadrifida Gyrostemon racemiger Gyrostemon ramulosus Gyrostemon sp. Hakea francisiana Hakea invaginata Hakea marginata Hakea meisneriana Hakea prostrata Hakea recurva subsp. recurva Hakea rigida P2 Hakea scoparia subsp. scoparia Halgania cyanea var. Allambi Stn (B.W. Strong 676) Halgania cyanea var. cyanea Halgania cyanea Halgania integerrima Halgania lavandulacea Halosarcia flabelliformis P1 Halosarcia halocnemoides Halosarcia indica subsp. bidens Halosarcia leptoclada subsp. inclusa Halosarcia lylei Halosarcia pergranulata Halosarcia sp. Hannafordia bissillii subsp. latifolia Hannafordia quadrivalvis subsp. quadrivalvis Hemigenia dielsii Hemigenia sp. Jibberding (J. D'Alonzo 418) Hemigenia sp. Sweet Webb (R.J. Chinnock 8266) Hemiphora elderi Heterodea muelleri Hibbertia ancistrophylla Hibbertia drummondii Hibbertia eatoniae Hibbertia exasperata Hibbertia glabriuscula P2 Hibbertia glomerosa var. glomerosa Hibbertia glomerosa Hibbertia graniticola P3 Hibbertia aff. pungens Hibbertia rostellata Hibbertia rupicola

Hibbertia sp. Hibbertia stowardii Homalocalyx pulcherrimus Homalocalyx thryptomenoides Hyalochlamys globifera Hyalosperma demissum Hyalosperma glutinosum subsp. glutinosum Hybanthus floribundus subsp. floribundus Hydrocotyle callicarpa Hydrocotyle diantha Hydrocotyle pilifera var. glabrata Hydrocotyle rugulosa Hypericum gramineum

Isoetes australis Isoetes drummondii Isoetes inflata Isolepis cernua var. setiformis Isolepis congrua *Isolepis marginata Isolepis sp. Isopogon scabriusculus subsp. stenophyllus Isotoma hypocrateriformis Isotoma petraea Isotropis juncea Isotropis sp.

Jacksonia arida Juncus aridicola Juncus radula

Kennedia prorepens Kennedia prostrata Kennedia sp. Keraudrenia velutina subsp. velutina Kunzea pulchella

Labichea lanceolata subsp. brevifolia Lawrencella rosea Laxmannia arida *Lepidium africanum Lepidium genistoides P2 Lepidobolus preissianus subsp. volubilis Lepidosperma costale Lepidosperma sp. Lepidosperma sp. Giant Terete culms (S.D. Hopper 8631) Lepidosperma ? viscidum Leptomeria preissiana Leptosema daviesioides Leptospermum erubescens Leptospermum incanum Leptospermum nitens Leptospermum roei Leucochrysum fitzgibbonii Leucopogon dielsianus Leucopogon hamulosus Leucopogon sp. Kau Rock (M.A. Burgman 1126) Leucopogon sp. Yanneymooning (F. Mollemans 3797) Levenhookia leptantha Lobelia sp. small flowers (K.F. Kenneally 7705) Logania flaviflora Lomandra collina Lomandra effusa

Lycium australe Lysiana? casuarinae Lysiana sp. Lysiosepalum hexandrum Lysiosepalum involucratum Lysiosepalum rugosum Maireana amoena Maireana carnosa Maireana georgei Maireana marginata Maireana oppositifolia Maireana sp. Maireana thesioides Maireana tomentosa subsp. tomentosa Maireana trichoptera Maireana triptera Malleostemon roseus Malleostemon tuberculatus Marianthus erubescens *Medicago minima Melaleuca acuminata subsp. acuminata Melaleuca atroviridis Melaleuca calyptroides Melaleuca conothamnoides Melaleuca cordata Melaleuca hamata Melaleuca hamulosa Melaleuca haplantha Melaleuca lanceolata Melaleuca lateriflora subsp. lateriflora Melaleuca laxiflora Melaleuca macronychia subsp. macronychia Melaleuca nematophylla Melaleuca pauperiflora subsp. fastigiata Melaleuca radula Melaleuca scalena Melaleuca sp. Melaleuca systena Melaleuca uncinata Melaleuca viminea Melaleuca vinnula Melaleuca zeteticorum Micromyrtus obovata Micromyrtus racemosa var. racemosa Microtis media subsp. eremicola Millotia eichleri Millotia myosotidifolia Millotia perpusilla Millotia tenuifolia Mirbelia floribunda Mirbelia magentea Mirbelia microphylla Mirbelia ramulosa Monachather paradoxus Monotaxis bracteata Muehlenbeckia adpressa Muehlenbeckia sp. Myriocephalus pygmaeus Myriophyllum lapidicola R Myriophyllum petraeum P4

Neurachne alopecuroidea Nicotiana rotundifolia Olearia exiquifolia Olearia minor Olearia muelleri Olearia pimeleoides Omphalolappula concava *Oncosiphon piluliferum Ophioglossum lusitanicum Oxalis perennans Ozothamnus occidentalis *Parentucellia latifolia Parmelina quercina Pelargonium australe *Pentaschistis airoides subsp. airoides Persoonia coriacea Persoonia quinquenervis Persoonia saundersiana Persoonia striata Phebalium ambiguum Phebalium brachycalyx x filifolium Phebalium canaliculatum Phebalium canaliculatum x? Phebalium filifolium Phebalium laevigatum Phebalium lepidotum Phebalium megaphyllum Phebalium sp. Phebalium tuberculosum Pheladenia deformis Philotheca brucei subsp. brucei Philotheca deserti subsp. deserti Philotheca langei P1 Philotheca thryptomenoides Philotheca tomentella Phlegmatospermum drummondii P3 Phyllangium sulcatum Physcia sp. Pimelea aeruginosa Pimelea avonensis Pimelea graniticola Pimelea imbricata Pimelea microcephala subsp. microcephala Pimelea sulphurea Pittosporum angustifolium Pityrodia lepidota Pityrodia teckiana Pityrodia terminalis Plantago debilis Plantago drummondii Platysace effusa Platysace juncea Pleuridium nervosum var. nervosum Pleurosorus rutifolius Podaxis pistillaris Podolepis capillaris Podolepis lessonii Podolepis tepperi Podotheca angustifolia Podotheca gnaphalioides Pogonolepis muelleriana Poranthera microphylla Prasophyllum gracile Prostanthera campbellii

Prostanthera grylloana Prostanthera incurvata Prostanthera semiteres subsp. semiteres Prostanthera sericea Psammomoya choretroides Psora crystallifera Pterostylis spathulata Ptilotus drummondii Ptilotus exaltatus var. exaltatus Ptilotus exaltatus Ptilotus gaudichaudii var. parviflorus Ptilotus holosericeus Ptilotus humilis subsp. humilis Ptilotus obovatus Ptilotus polystachyus var. polystachyus Ptilotus spathulatus forma spathulatus Puccinia stylidii

Quinetia urvillei

Rhagodia drummondii Rhagodia preissii subsp. preissii Rhodanthe citrina Rhodanthe heterantha Rhodanthe laevis Rhodanthe manglesii Rhodanthe pygmaea Rhodanthe rubella Rhodanthe spicata Riccia crystallina Riccia limbata Ricinocarpos muricatus Rinzia carnosa Rosulabryum billarderi Rosulabryum campylothecium Rosulabryum capillare Rosulabryum subtomentosum Rosulabryum torquescens Roycea? divaricata Rovcea divaricata Rovcea spinescens Rulingia cuneata Rulingia luteiflora

Santalum acuminatum Scaevola restiacea Scaevola spinescens *Schismus barbatus Schoenia cassiniana Schoenus hexandrus Schoenus nanus Schoenus sp. Sclerolaena diacantha Sclerolaena drummondii Sclerolaena eurotioides Sclerolaena fusiformis Sclerolaena obliquicuspis Sclerolaena parviflora Sclerostegia disarticulata Sebaea ovata Selaginella gracillima Senecio glossanthus Senecio quadridentatus Senna artemisioides subsp. filifolia

Senna artemisioides subsp. x artemisioides Senna artemisioides subsp. x coriacea Senna cardiosperma Senna charlesiana Senna pleurocarpa var. angustifolia Senna stowardii Sida calyxhymenia Siloxerus multiflorus Siphula coriacea *Sisvmbrium irio *Sisymbrium runcinatum Sisymbrium sp. Solanum coactiliferum Solanum ellipticum Solanum hoplopetalum Solanum lasiophyllum Solanum nummularium Solanum orbiculatum *Sonchus oleraceus Spartochloa scirpoidea Spiculaea ciliata Stackhousia monogyna Stellaria filiformis Stenanthemum stipulosum Stenopetalum filifolium Stenopetalum lineare var. lineare Stylidium arenicola Stylidium calcaratum Stylidium chiddarcoopingense P2 Stylidium dielsianum Stylidium ecorne Stylidium inundatum Stylidium limbatum Stylidium merrallii R Suaeda baccifera Syntrichia antarctica Templetonia sp. Templetonia sulcata Tetrapterum cylindricum Teucrium sessiliflorum Thelotrema lepadinum Thomasia rugosa Thomasia sarotes Thryptomene australis subsp. australis

Thryptomene australis subsp. austra Thryptomene costata Thryptomene kochii Thysanothecium hookeri Thysanotus dichotomus Thysanotus manglesianus Thysanotus patersonii Thysanotus sp. Thysanotus speckii Thysanotus spiniger Thysanotus tenuis P3 Tortula atrovirens Tortula recurvata Tortula villisiana var. willisiana Trachymene cyanopetala Trachymene ornata Tribonanthes longipetala Trichodesma zeylanicum Triglochin sp. Triglochin sp. A Flora of Australia (G.J. Keighery 2477) Triodia rigidissima Tripogon loliiformis Triquetrella papillata *Triticum aestivum Trymalium daphnifolium

Velleia cycnopotamica Velleia discophora Verreauxia villosa Verticordia chrysantha Verticordia eriocephala Verticordia mitodes P3 Verticordia picta Verticordia pritzelii Verticordia rennieana Verticordia stenopetala P3 Vittadinia sp. *Vulpia myuros Vulpia sp.

Wahlenbergia gracilenta Wahlenbergia preissii Wahlenbergia sp. Waitzia acuminata var. acuminata Waitzia acuminata Waitzia acuminata Waitzia nitida Weissia brachycarpa Weissia brachycarpa Weissia rutilans Westringia cephalantha Westringia rigida Wilsonia humilis Wrixonia prostantheroides Wurmbea densiflora Wurmbea tenella

Xanthoparmelia constipata Xanthoparmelia flindersiana Xanthoparmelia reptans Xanthoparmelia semiviridis Xanthoparmelia sp. Xerolirion divaricata

*Zaluzianskya divaricata Zygophyllum apiculatum Zygophyllum eremaeum

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APPENDIX 5

Fauna species in the Shire of Westonia (Source- WA Museum, 2007)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates -30.2, 118.52 and -31.56, 118.95.

Note - not a comprehensive list.

* represents an introduced species.

AMPHIBIANS

Myobatrachidae

False Western Froglet (*Crinia pseudinsignifera*) Western Spotted Frog (*Heleioporus albopunctatus*) Bullfrog (*Limnodynastes dorsalis*) Gunther's Toadlet (*Pseudophryne guentheri*)

BIRDS

Acanthizidae Aphelocephala leucopsis castaneiventris

Casuariidae Emu (*Dromaius novaehollandiae*)

Climacteridae Rufous Treecreeper (Climacteris rufa)

Corvidae Western Crow (Corvus orru cecilae)

Cracticidae Australian Magpie (Cracticus tibicen)

Dicruridae Grey Fantail (*Rhipidura fuliginosa preissi*)

Maluridae Splendid Fairy-wren (Malurus splendens)

Megapodiidae Malleefowl (*Leipoa ocellata*)

Meliphagidae

Yellow-plumed Honeyeater (*Lichenostomus ornatus*) Brown-headed Honeyeater (*Melithreptus brevirostris leucogenys*)

Pardalotidae

Striated Pardalote (Pardalotus striatus) Striated Pardalote (Pardalotus striatus westraliensis)

Podargidae Tawny Frogmouth (Podargus strigoides)

Psittacidae

Western Rosella (*Platycercus icterotis*) Australian Ringneck (*Platycercus zonarius*)

MAMMALS

Dasyuridae Chuditch (*Dasyurus geoffroii*) Fat-tailed Dunnart (*Sminthopsis crassicaudata*)

Survey of Roadside Conservation Values in the Shire of Westonia

Little Long-tailed Dunnart (*Sminthopsis dolichura*) Grey-bellied Dunnart (*Sminthopsis gilberti*)

Leporidae

*European Wild Rabbit (Oryctolagus cuniculus)

Molossidae

Little Mastiff Bat (*Mormopterus planiceps*) White-striped Freetail Bat (*Tadarida australis*)

Muridae

*House Mouse (*Mus musculus*) Mitchell's Hopping-mouse (*Notomys mitchellii*)

Vespertilionidae

Gould's Wattled Bat (*Chalinolobus gouldii*) Chocolate Wattled Bat (*Chalinolobus morio*) Lesser Long-eared Bat (*Nyctophilus geoffroyi*) Inland Broad-nosed Bat (*Scotorepens balstoni*) Southern Forest Bat (*Vespadelus regulus*)

REPTILES

Agamidae

Crested Bicycle Dragon (*Ctenophorus cristatus*) *Ctenophorus maculatus griseus* Ornate Rock Dragon (*Ctenophorus ornatus*) Western Netted Dragon (*Ctenophorus reticulates*) Lozenge-marked Bicycle Dragon (*Ctenophorus scutulatus*) Thorny Devil (*Moloch horridus*)

Elapidae

Southern Shovel-nosed Snake (*Brachyurophis* semifasciata) Monk Snake (*Parasuta monachus*)



The Grey-bellied Dunnart can be found in the Shire of Westonia.

Photography by G. Barron. Photography used with the permission of the WA Museum, FaunaBase www.museum.wa.gov.au/faunabase/prod/index.htm

King Brown Snake (*Pseudechis australis*) Dugite (*Pseudonaja affinis affinis*) Ringed Brown Snake (*Pseudonaja modesta*) Western Brown Snake (*Pseudonaja nuchalis*) Jan's Banded Snake (*Simoselaps bertholdi*) Rosen's Snake (*Suta fasciata*)

Gekkonidae

Clawless Gecko (*Crenadactylus ocellatus ocellatus*) Western Stone Gecko (*Diplodactylus granariensis*) Wheatbelt Stone Gecko (*Diplodactylus granariensis* granariensis) Main's Ground Gecko (*Diplodactylus maini*) Beautiful Gecko (*Diplodactylus pulcher*) Variegated Dtella (*Gehyra variegate*) Bynoe's Gecko (*Heteronotia binoei*) Reticulated Velvet Gecko (*Oedura reticulate*) Western Spiny-tailed Gecko (*Strophurus spinigerus*) Thick-tailed Gecko (*Underwoodisaurus milii*)

Pygopodidae

Marbled-faced Delma (*Delma australis*) Fraser's Legless Lizard (*Delma fraseri fraseri*) Burton's Legless Lizard (*Lialis burtonis*) Common Scaly Foot (*Pygopus lepidopodus*)

Scincidae

Fence or Wall Skink (*Cryptoblepharus plagiocephalus*) Odd-striped Skink (*Ctenotus impar*) Checker-side Skink (*Ctenotus mimetes*) Striped Skink (small) (*Ctenotus schomburgkii*) *Ctenotus uber uber* West Coast Line-spotted Lerista (*Lerista lineopunctulata*) Unpatterned Robust Slider (*Lerista macropisthopus macropisthopus*) Mueller's Lerista (*Lerista muelleri*) Grey's Skink (*Menetia greyii*) Butler's Morethia (*Morethia butleri*) Southwestern Bobtail (*Tiliqua rugosa rugosa*)

Typhlopidae

Beaked Blind Snake (Ramphotyphlops waitii)

Varanidae

Gould's Goanna (Varanus gouldii)



G. Haroid moloch@dodo.com.au The West Coast Line-spotted Lerista can be found in the Shire of Westonia.

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ROADSIDE CONSERVATION COMMITTEE

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

Preamble

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

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

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

In some instances the Roadside Conservation Committee (RCC) is supportive of the sustainable harvesting of flora, such as salvage (removal of dead material that is not significant wildlife habitat or is material to be destroyed by road works), or the selective collection of seed for revegetation. However, each case should be viewed on its merits and any decision to facilitate harvesting from roadsides should be referred to the Department of Environment and Conservation and/or the RCC for advice. Licences allowing the taking of roadside flora may be issued by the Department of Environment and Conservation 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 the Department of Environment and Conservation. In issuing a licence, the Department of Environment and Conservation is required to be assured that the activity will not compromise the conservation of the flora. In determining this, the Department of Environment and Conservation 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 the Department of Environment and Conservation 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 the Department of Environment and Conservation, 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 the Department of Environment and Conservation.
- ✓ 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 the Department of Environment and Conservation.
- ✓ 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 the Department of Environment and Conservation.
- ✓ No flora of special conservation concern (Declared Rare Flora or Priority Flora) should be removed without special authorisation through the Department of Environment and Conservation.
- ✓ No commercial harvesting of any plant product should be allowed for any reason between the markers that delineate an Environmentally Sensitive 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.

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Guidelines for the Nomination and Management of Flora Roads

Introduction

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

The RCC 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;
 - May contain rare or endangered plants;
 - May provide nest sites and refuges for native animals; and
 - May act as a biological corridor.

Identification and Nomination of Flora Roads

The RCC has been coordinating a volunteer roadside survey program since 1989, which provides a list of high conservation value roads within many Shires in the agricultural areas of this state. These roadsides can be investigated further to see 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 (Main Roads WA, Local Government or the Department of Environment and Conservation);
- Distance of the proposed Flora Road; and
- Width of the road reserve.

The following information would also be useful:

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

This information will be stored in the RCC Flora Roads Register, a database that is maintained by the RCC.



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.

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; and
- 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, Main Roads WA, the **Department of Environment and Conservation**) establish a *Register of Roads Important for Conservation* also. This register should be consulted prior to any works being initiated in the area.