Roadside Vegetation and Conservation Values in the Shire of Donnybrook-Balingup



Photo by G. Hale

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Roadside Conservation Committee

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Executive Summary

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

Aware of the need to conserve roadside remnants, the Shire of Donnybrook-Balingup, local community members and Amanda Malone, the Landcare Coordinator, liaised with the Roadside Conservation Committee (RCC) in 2007 to survey roadsides in their Shire. Surveys to assess the conservation values of roadside remnants were conducted between September and December 2007. The majority, 82.1%, of the Shire's 711.04 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 the risk of fire on roadsides were also recorded and mapped onto separate clear overlays.

The results of the survey indicated that high conservation value roadsides covered 35.2% of the roadsides surveyed in the Shire, with medium-high conservation value roadsides accounting for 13.5%. Medium-low and low conservation value roadsides occupied 8.1% and 43.2%, respectively. A more detailed analysis of results is presented in Part C of this report.

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

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

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

PART A

OVERVIEW OF ROADSIDE CONSERVATION

1.0 Why is Roadside Vegetation Important?

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

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



the WA Museum, FaunaBase (http://www.museum.wa.gov.au/faunabase.htm).

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, more than 50% of Declared Rare Flora (DRF) have at least one roadside population and three species are known only to exist on roadsides;
- 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 clearing.

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

2.3 Fire

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

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

The RCC's policy on fire management is:

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

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

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



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

2.4 Weeds

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

Once weeds become established in an area, they become a long-term management issue, costing considerable resources to control or eradicate. The WA Herbarium records 49 weed species in the Shire of Donnybrook-Balingup (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:

- Blackberry (Rubus fruticosus)
- Bridal Creeper (Asparagus asparagoides)
- Watsonia (Watsonia sp.)
- African Lovegrass (Eragrostis curvula)
- Wild Radish (Raphanus raphanistrum)
- Tree Weeds (eg: Willows, Pines, Black Wattle etc)

Roadside populations of these weeds can be observed on the weed overlays provided with the Donnybrook-Balingup Roadside Conservation Value map (2008). The Roadside Conservation Value map and weed overlays will assist the Shire and community in planning, budgeting and coordinating strategic weed control projects. Further information on the presence of these nominated weeds is presented in Part C.



Originating from South Africa, the Bridal Creeper was brought to Australia as a foliage plant.

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



The Blackberry can significantly affect recreational sites and overcrowd native bushland. Photography by A. Ireland. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse).



Watsonia species have been found within the Shire of Donnybrook-Balingup.

Photography by B.A. Fuhrer & T.J. Alfod. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/help/photos#reuse).

2.5 Salinity

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

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

Data on salinity and roadsides for the Shire of Donnybrook-Balingup is not available. However, several surrounding Shires have been affected (*Salinity Investment Framework Interim Report,* 2003). The data from these Shires can be seen below.

Shire			Roads potentially affected by salinity - length in km						
	length assessed (km)	Highways	Local roads	Main roads	Other roads	Total affected	% of total potentially affected		
Boyup Brook	970.67	-	17.00	1.18	11.18	29.35	3.02		
Collie	610.67	-	6.40	.15	38.93	45.48	7.45		
Bridgetown-Greenbushes	695.67	-	1.93	-	5.00	6.93	1.00		
West Arthur	884.85	1.45	30.00	1.98	13.75	47.18	5.33		

Table 1. 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 require a permit, unless it is for an exempt purpose. The *Environmental Protection (Clearing of Native Vegetation) Regulations* 2004 detail these requirements. Clearing applications are assessed against twelve clearing principles, which incorporate the:

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

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

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

4.0 Environmentally Sensitive Areas

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

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

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

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

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



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

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

5.0 Flora Roads

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



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

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

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

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

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

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

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



PART B THE NATURAL **ENVIRONMENT IN DONNYBROOK-**BALINGUP

1.0 Flora

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

The WA Herbarium has recorded over 668 species of native plants from the Shire of Donnybrook-Balingup. The most prolific genera are Acacia (27 spp.), Leucopogon (17 spp.), Drosera (14 spp.), Stylidium (14 spp.). The complete list of recorded flora can be seen in Appendix 4 of this report.

2.0 Declared Rare Flora (DRF)

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



Goodenia eatoniana

Goodenia eatoniana can be found within the Shire of

Donnybrook-Balingup.

Photography by P.G. Armstrong, B.A. Fuhrer, M. Hislop & J. Scott. Photo used with the permission of the WA Herbarium, DEC http://florabase.calm.wa.gov.au/browse/profile/7505

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 Blackwood District. If roadworks are to be carried out near DRF sites, it is advisable to contact DEC at least six weeks in advance.

As of February 2008, 15 locations of Declared Rare and Priority Flora are known to occur within Shire of Donnybrook-Balingup. 4 of these sites occur in roadsides vested in the Shire of Donnybrook-Balingup.



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

In total, there is one species of Declared Rare Flora (DRF) and eight species of Priority Flora that occur in these roadside locations in the Shire, these are:

Declared Rare Flora

Daviesia elongata subsp. elongata

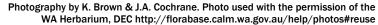
Priority Flora

- Acacia semitrullata (P3)
- Aotus cordifolia (P3)
- Boronia humifusa (P1)
- Caustis sp. Boyanup (P1)
- Goodenia arthrotricha (P2)
- Grevellia ripicola (P4)
- Senecio gilbertii (P1)
- Tetratheca parvifolia (P3)

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



Daviesia elongata attracts ants with a protein rich elaisome around their seeds.



3.0 Fauna

The Western Australian Museum records approximately 120 species of fauna from the Donnybrook-Balingup 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 Donnybrook-Balingup area, there were 56 bird, 8 amphibia, 26 mammal, 7 fish and 23 reptile species.



The Tiger Snake has been seen in the Shire of Donnybrook-Balingup.

Many fauna species, particularly small birds need continuous corridors of dense vegetation to move

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

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), five species of threatened and priority fauna have been recorded or sighted throughout the Shire of Donnybrook-Balingup, and these are listed below.

Chuditch (Dasyurus geoffroii)

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

Brush-tailed Phascogale

(Phascogale tapoatafa ssp.)

The Brush-tailed Phascogale inhabits forests and woodlands where suitable tree hollows are available. Populations have been known to fluctuate dramatically in response to invertebrate prey abundance.

Western Ringtail Possum

(Pseudocheirus occidentalis)

This species occurs in areas of forest and dense woodlands and requires tree hollows and/or dense canopy for refuge and nesting.

Water-rat (Hydromys chrysogaster)

Water-rats can be found in waterways and wetlands that support its main prey items such as molluscs and crustaceans.

Quenda (Isoodon obesulus fusciventer)

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



The Chuditch has been shown to use roadside vegetation as a corridor between bush remnants.

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



The Quenda has been observed within the Shire of Donnybrook-Balingup. Picture by Martin Thompson, Photo used with the permission of the WA Museum, FaunaBase (http://museum.wa.gov.au/faunabase.htm).

4.0 Remnant Vegetation Cover

Approximately 72% of the original native vegetation remains in the Shire of Donnybrook-Balingup 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. Donnybrook-Balingup has around 72% remaining which is considered very high, however this percentage can quickly and easily fall if proactive measures are not taken to manage this priceless resource.

Shire	Total Area (ha)	Area Inside Ag. Clearing Line	Vegetation Cover Remaining (inside agricultural clearing line)		
	(114)	(ha)	(ha)	(%)	
Donnybrook-Balingup	155,143	155,143	111,737	72.0	
Dardanup	53,995	53,995	28,182	52.2	
Busselton	145,966	145,996	64,905	44.5	
Nannup	293,198	293,198	275,524	94.0	
Boyup Brook	282,638	282,638	127,847	45.2	
Capel	55,869	55,869	20,059	35.9	

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

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



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 **DONNYBROOK-**BALINGUP

1.0 Introduction

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

The majority (583.80km, or 82.1%) of the Shire of Donnybrook-Balingup's 711.04km of roads were surveyed and then assessed to determine the conservation status of the road reserves. Fieldwork was carried out throughout the months of September and October 2007. The enthusiastic effort of the roadside surveyors, Amanda Malone, with the support provided by Donnybrook-Balingup Shire Council ensured that this project was successfully completed. The roadside surveyors were:

Margaret Andrews;

- Amanda Malone;
- Coral Stewart:
- Allen Brooks;
- Ken Russell;
- Diana Davidson;

- Jane Gilham;
- Irene Campbell;

- Ian Archibold;
- Gwendoline Nidd;
- Russell Peterkin
- Margaret Parke; and
- Graeme Campbell.

1.1 Methods

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

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

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

- structure of native vegetation on roadside;
 - extent of native vegetation along roadside;
- number of native species;

- level of weed infestation;
- value as a biological corridor; and
- predominant adjoining land use.

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

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

- Logan Anderson;
 - Keith Edmunds;

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
- fire risk.

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 Donnybrook-Balingup. 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 Donnybrook-Balingup. 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.

<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.

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



Medium-low conservation value roadsides 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 (Figure 1). 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, or the location of environmentally sensitive areas or future planned developments, could also be produced as an aid to roadside management.

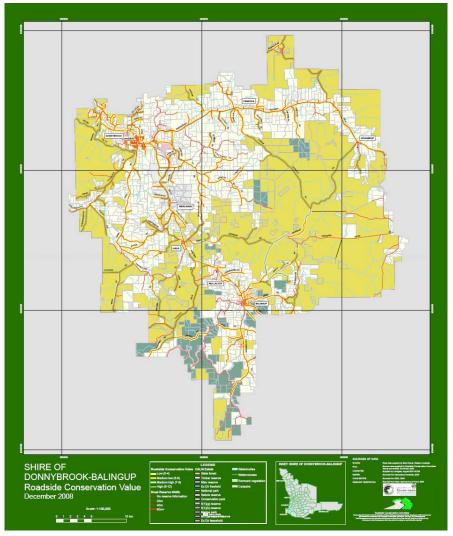


Figure 1. Roadside Conservation Map of Donnybrook-Balingup.

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

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



Weed control along a roadside. Photo MRWA



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



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



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

3.0 RESULTS

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

Length of roadside	es surveyed:	1167.60k	m (583.80 km of ro	oad)	
Roadside Conservatio	on Status		Roadside Cor	nservation V	/alue
	Total (km)	(%)	Score	Total (km)	(%
High (9-12)	411.0	35.2	0	17.5	1
Medium-high (7-8)	157.1	13.5	1	185.8	15
Medium-low (5-6)	95.1	8.1	2	131.4	11
Low (0-4)	504.4	43.2	3	103.2	8
			4	66.6	5
Total	1167.6	100.0	5	48.7	4
	1107.0	100.0	6	46.4	4
Nativo Vogotation in P	oodsidas		7	40.4 56.2	4
Native Vegetation in R		(0/)			
0.0	Total (km)	(%)	8	100.9	8
2-3 vegetation layers	593.1	50.8	9	74.2	6
1 vegetation layer	260.9	22.3	10	313.4	26
0 vegetation layers	313.6	26.9	11	20.3	1
			12	3.0	0
Total	1167.6	100.0			
			Total	1167.6	100
Number of Native Plan	t Species				
	Total (km)	(%)	Width of Veg	etated Roa	dside
Over 20 species	484.0	41.5		Total (km)	(%
6 to 19 species	183.7	15.7	1 to 5 m	677.4	58
0 to 5 species	499.9	42.8	5 to 20 m	88.1	7
			Over 20 m	320.4	27
Total	1167.6	100.0	Unknown	81.7	7
Predominant Adjoining	Land Use		Total	1167.6	100
	Total (km)	(%)			
Agricultural: completely cleared	273.4	23.4	Extent of Na	ative Vegeta	ation
Agricultural: scattered vegetation	314.5	26.9		Total (km)	(%
Uncleared native vegetation	393.6	33.7	Over 80%	395.1	33
Drain	1.4	0.1	20% to 80%	264.8	22
Plantation of non-natives	71.8	6.2	Less than 20%		43
Railway	71.8 34.0	0.2 2.9	LE33 (1101) 2070	507.7	40
Urban or Industrial	34.0 78.9	∠.9 6.8	Total	1167.6	100
	78.9	0.8	IUIAI	0.1011	100
Total	1167.6	100.0	<u>Value as a Bi</u>		
			1.12 - 14	Total (km)	(%
Weed Infestation			High	416.5	35
	Total (km)	(%)	Medium	143.4	12
Light <20% weeds	497.4	42.6	Low	607.7	52
Medium 20-80% weeds	299.3	25.6			
Heavy >80% weeds	370.9	31.8	Total	1167.6	100
Total	1167.6	100.0			

Table 3. Summary of results from the roadside survey in the Shire of Donnybrook-Balingup

Width of Road Reserve

The width of road reserves in the Shire of Donnybrook-Balingup was recorded in increments of 20 metres (Table 4). The majority of road reserves were 20 metres in width, with 306.79km (52.55%) of roads falling into this category. Reserves of 40m covered 53.02km (9.08%) and roads where the reserve width was Unknown covered 164.89km (28.25%).

Width of Vegetated Road Reserve

The width of vegetated roadside was recorded by selecting one of three categories, 1-5 metres, 5-20 metres or over 20 metres in width. The left and right hand sides were recorded independently, and then combined to establish the total figures (Table 5). The majority of roadside vegetation, 677.36km (58.01%), was between 1 to 5 metres in width, followed by 320.37km (27.44%) of roadsides where the width of vegetation was over 20 metres in width. Roadside vegetation between 5 and 20 metres in width spanned 88.16km (7.55%) of the roadsides surveyed, whilst the width was unknown for 81.69km (7.00%) of the roadsides surveyed.

Width of Road Reserve - Donnybrook-Balingup							
Total km %							
20 m	306.79	52.55					
40 m	53.02	9.08					
Unknown	223.98	38.37					
Total	583.8	100.00					

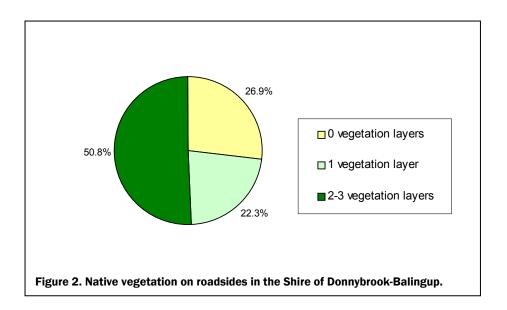
Table	4.	Width	of	road	reserves	in	the
Shire	of D	onnybr	ook	-Balin	igup.		

Width of Vegetated Roadside - Donnybrook-Balingup							
	Total km	%					
1-5 m	677.36	58.01					
5-20 m	88.16	7.55					
Over 20 m	320.37	27.44					
Unknown	81.71	7.00					
Total	1167.60	100.00					

Table 5. Width of vegetation on roadsidesin the Shire of Donnybrook-Balingup.

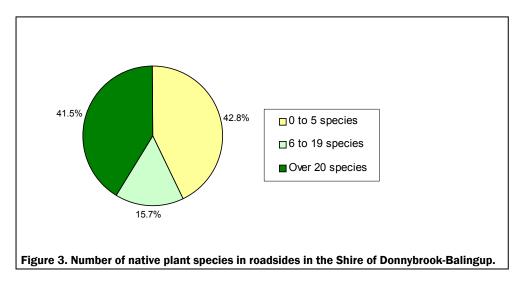
Native Vegetation on Roadsides

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 50.8% (593.11km) of roadsides, 22.3% (260.93km) of roadsides had only one layer and 26.9% (313.54km) had no layers of native vegetation (Table 3 and Figure 2).



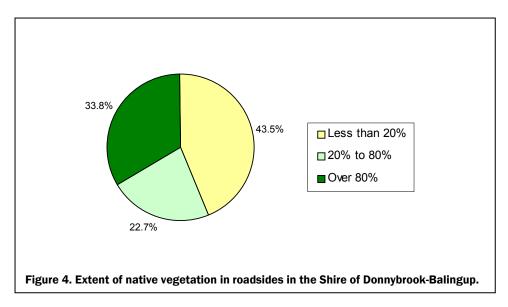
Number of Native Plant Species

The number of native plant species provides a measure of the diversity of the roadside vegetation. Survey sections with over 20 plant species spanned 41.5% (484.01km) of the roadsides surveyed. Roadside sections with 6 to 19 plant species accounted for 15.7% (183.66km) of the roadside. Roadside sections with 0 to 5 plant species account for 42.8% (499.91km)(Table 3 and Figure 3).



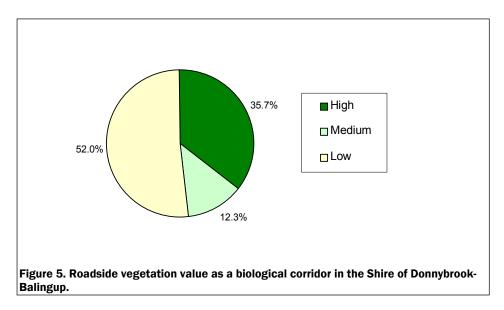
Extent of Native Vegetation

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 33.8% (395.08km) of the roadsides surveyed. Survey sections with medium vegetation cover, i.e. 20% to 80%, accounted for 22.7% (264.78km) of the roadsides. The remaining 43.5% (507.72km) had less than 20% native vegetation and therefore a low 'extent of native vegetation' value (Table 3 and Figure 4).



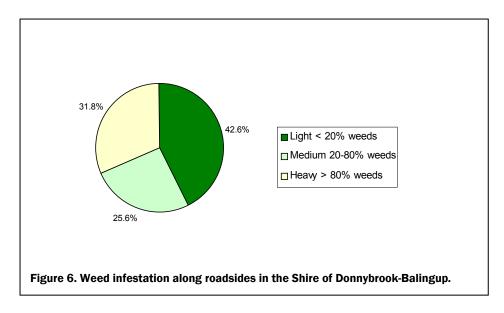
Value as a Biological Corridor

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 35.7% (416.47km) of the roadsides surveyed. Roadsides with medium value as biological corridors made up 12.3% (143.39km), and roadsides with low value as a biological corridor occurred along 52.0% (607.72km) of the roadsides surveyed (Table 3 and Figure 5).



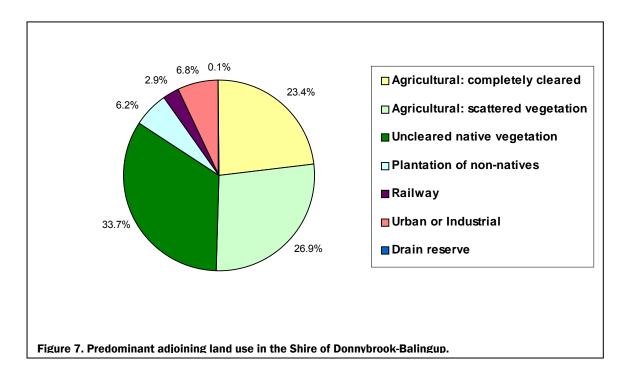
Weed Infestation

Light levels of weed infestation (weeds comprising less than 20% of total plants), were recorded on 42.6% (497.39km) of the roadsides surveyed, medium level weed infestation (weeds comprising 20-80% of the total plants) occurred on 25.6% (299.26km) of the roadsides and 31.8% of roadsides (370.93km) were heavily infested with weeds (weeds comprising more than 80% of the total plants) (Table 3 and Figure 6).



Predominant Adjoining Land Use

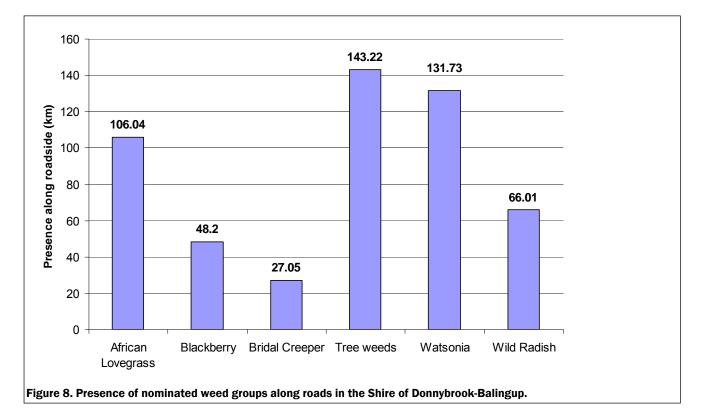
Uncleared native vegetation was present on 33.7% (393.60km) of the land adjoining roadsides, whilst 23.4% (273.38km) of roadsides adjoined land that had been completely cleared for agriculture. Land cleared for agriculture, containing a scattered distribution of native vegetation comprised 26.9% (314.45km) of the roadsides. Railway reserves adjoined 2.9% (34.0km) of the roadsides, urban or industrial land uses adjoined 6.8% (78.94km). Plantations of non-native flora were found on 6.2% (71.81km) of roadside and Drain reserves were recorded on 0.1% (1.40km) (Table 3 and Figure 7).



Nominated Weeds

The following weeds are depicted on clear overlays accompanying the 2008 Roadside Conservation Value map:

- Blackberry (Solanum nigrum);
- Bridal Creeper (Asparagus asparagoides);
- Watsonia (*Watsonia* sp.);
- African Lovegrass (*Eragrostis curvula*);
- Wild Radish (Raphanus raphanistrum); and
- Tree weeds (eg: Black Wattle, Pines, Willows etc).



These weeds were only recorded as being present or absent in each roadside section. The density of weed infestations was not recorded and nor was there a separate recording for the left and right sides of the roads. Figure 8 displays the proportion of roads (expressed as a percentage of the total length of surveyed roads) that contain each weed. As such, this length provides a general indication of the extent of each weeds presence in the Shire's roadsides.

Of the nominated weeds species, Tree weeds were the most prevalent, and were found to occur on 143.22km of the roads surveyed. The next most commonly occurring weeds were Watsonia and African Lovegrass, which were present along 131.73km and 106.04km of roads respectively. Wild Radish was found to inhabit 66.01km of road reserves and Blackberry was found on 48.2km. Finally Bridal Creeper was recorded on 27.05km of road reserves within the Shire (Figure 8). The maps in Figure 9 indicate which roadside sections contained each of the nominated weed species.

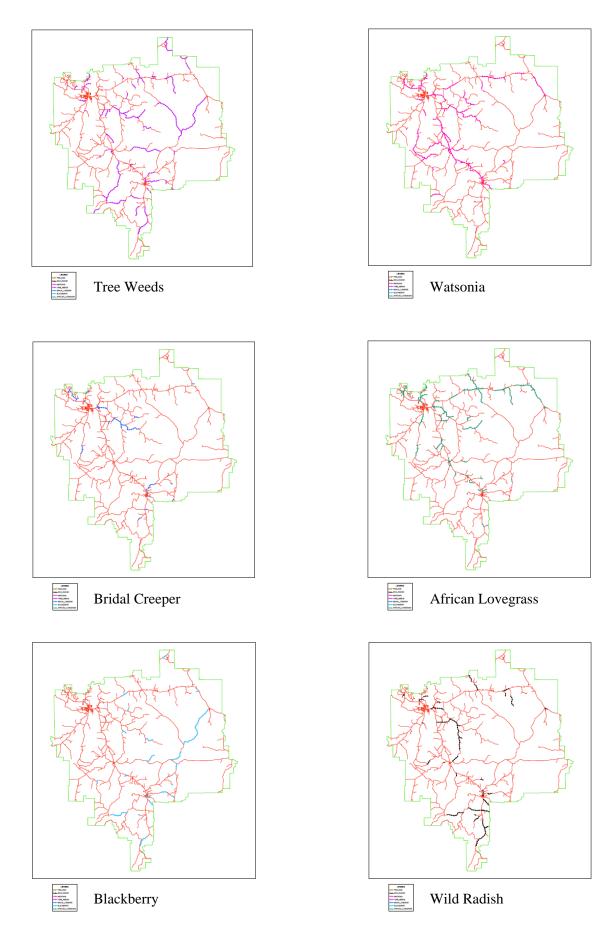
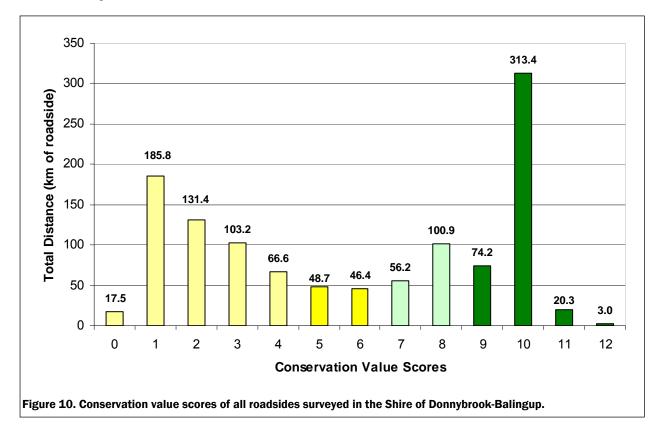


Figure 9. Spatial extent of nominated weeds of roadsides in the Shire of Donnybrook-Balingup.

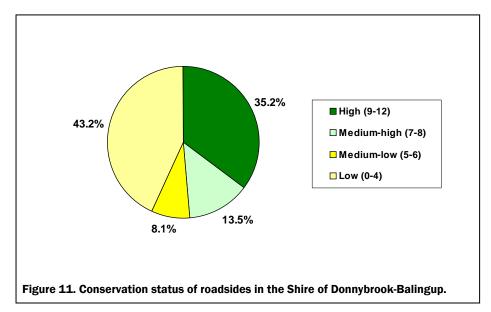
Conservation Value Scores

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 10). The most occurring roadside conservation value score was 10, with 313.4km of roadsides recording this score. Following this, 185.8km of roadsides recorded a score of 1, 131.4km recorded a score of 2 and 103.2km recorded a score of 3. 100.9km of roadsides had a score of 8, 74.2km recorded a score of 9, and 66.6km of roadsides had a score of 4. 56.2km recorded a score of 7, 48.7km recorded a score of 5 and 46.4km of roadsides recorded a score of 6. 20.3km recorded a high of 11, 17.5km had a score of 0 and 3.0km of roadsides recorded a score of 12.



Conservation Status

The conservation status category indicates the combined conservation value of roadsides surveyed in the Shire of Donnybrook-Balingup. Roadside sections of high conservation value covered 35.2% (411.03km) of the roadsides surveyed. Medium-high conservation value roadsides accounted for 13.5% of the total surveyed (157.07km), medium-low conservation roadside covered 8.1% (95.07km) of the total roadsides surveyed. Roadsides of low conservation value occupied 43.2% (504.41km) of the roadsides surveyed (Table 3 and Figure 11).

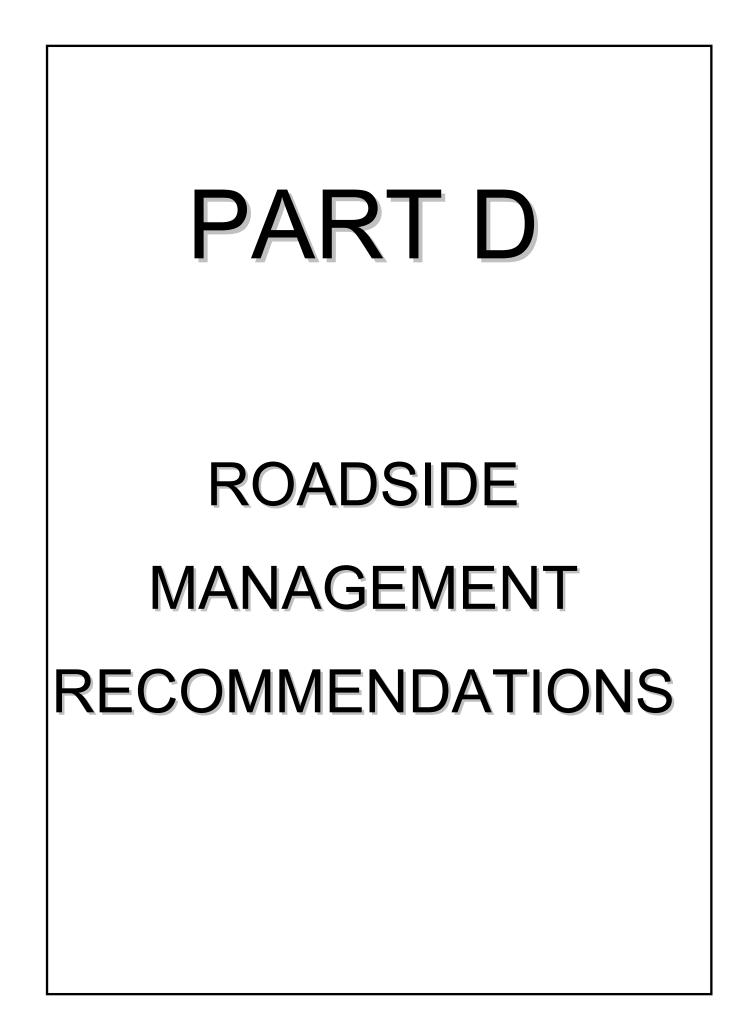


Flora Roads

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

Although presently there are no Flora Roads designated within the Shire of Donnybrook-Balingup, the roadside survey and the 2008 RCV map highlighted a number of roadsides that have the potential to be declared as Flora Roads. Roadsides, or large sections of roadsides, determined as having high conservation value in the Shire of Donnybrook-Balingup include:

- Prowse Road;
- Knights Road;
- Jarrahwood Road;
- Claymore Road; and
- Parts of Lowden Grimwade 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) 9334 0423. The following RCC publications provide guidelines and management recommendations that will assist Local Government Authorities:

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

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

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

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

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

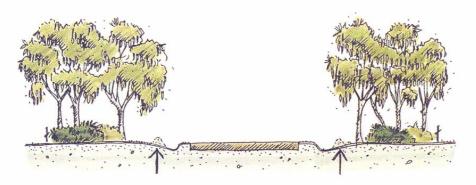
1.3 Improve roadside sections of medium to low conservation value by:

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

2.0 Minimising Disturbance

Minimal disturbance can be achieved by:

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

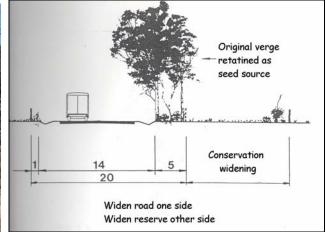


Avoid windrowing drain material into vegetation

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



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



3.0 Planning for Roadsides

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

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

- <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) 9334 0423.

4.0 Setting Objectives

The objective of all roadside management should be to:

Protect

- native vegetation
- rare or threatened flora or fauna
- cultural and heritage values
- 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

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SURVEY TO DETERMINE THE CON ROADSIDES IN THE SHIRE OF			Roadside Conservati C/- Locked Bag 104 Bentley Delivery Cer		Phone: (08) Fax: (08) 933	
Date Observer(s)		No. OF DIFFERENT	<u> NATIVE SPECIES</u> □		WEEDS	
Road Name Shire Nearest named place		6 – 19 Over 20		<20% total wee 20 – 80% total		
Direction of travel			OGICAL CORRIDOR	>80% total we	eds	
Starting Point Odometer reading Ending Point		Connects uncleared Flowering shrubs Large trees with hol Hollow logs		<20% total were 20 – 80% total >80% total were	weeds	
Odometer reading Length of Section		PREDOMINANT AD Agricultural crop or p - Completely clear - Scattered		<20% total were 20 – 80% total >80% total were	weeds	
WIDTH OF VEGETATED ROADSIDE	eft Right	Uncleared land Plantation of non-na Urban or Industrial Railway reserve pa Drain reserve paral Other:	ative trees	<20% total wee 20 – 80% total >80% total wee <20% total wee >20% total wee	weeds eds eds	
NATIVE VEGETATION ON ROADSIDE Tree layer Shrub layer Ground layer		UTILITIES Utility Present Utility Absent Type:		20 – 80% total >80% total wer <20% total wer 20 – 80% total	eds eds weeds	
Less than 20%		GENERAL WEEDS Few weeds (<20% Half weeds (20 – 80 Mostly weeds (>80 Ground layer totally	total plants) 0% total) % total)	>80% total were NOMINATED	<u>) WILDCARD</u> E ONLY	

Appendix

2

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	# Na Pla Spe	int	W	eeds	B	ue as liol. rridor	Adj Lar	oining nduse	j Co Va	onservation alue Score (0-12)	Overlay Data
		()	()					(m)	Left	Right	Left	Right			Left	Right			Left	Right	t Lef		(Listed if Present)
2170001	1	0	0.38	0.38	RESERVE ST	East	13/11/2007	20	0 0	0	0	C	0	0	1	1	0	0	C) ()	1 1	FIRE_RISK
2170002	1	0	1.2	1.2	BENTLEY ST	West	13/11/2007	20	0 0	0	0	C	0	0	1	1	0	0	C) ()	1 1	FIRE_RISK
2170003	1	0	1	1	COLLINS ST	South	13/11/2007	20	0 0	0	0	C	0	0	1	1	0	0	C) ()	1 1	FIRE_RISK
2170004	1	0	1	1	EMERALD ST	South	13/11/2007	20	0 0	0	0	C	0	0	1	1	0	0	C) ()	1 1	FIRE_RISK
2170005	1	0	1	1	THOMSON BROOK RD	East	13/11/2007	20) 1	1	0	C	0 0	0	0	0	0	0	1	.	1		WATSONIA WILD_RADISH BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170005	2	1	2.7		THOMSON BROOK RD	East	13/11/2007	20	0 0	0	0	C	0 0	0	0	0	0	0	1		1		WATSONIA BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170005	3	2.7	5.9	3.2	THOMSON BROOK RD	East	13/11/2007	20) 1	1	0	C	0	0	0	O	0	0	1		1		WATSONIA AFRICAN_LOVEGRASS BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170005	4	5.9	6.1	0.2	THOMSON BROOK RD	East	13/11/2007	20) 1	1	2	C	2	0	2	0	2	0	C)	1		WATSONIA TREE_WEEDS FIRE_RISK
2170005	5				THOMSON BROOK RD	East	13/11/2007			1	0	C	0	0	0	0	0	0	1		1		WATSONIA TREE_WEEDS FIRE_RISK
2170005	6	6.6	8.6	2	THOMSON BROOK RD	East	13/11/2007	20	0 0	0	0	C	0	0	0	0	0	0	1	'	1	1 1	WATSONIA FIRE_RISK
2170005	7	8.6	10.23	1.63	THOMSON BROOK RD	East	13/11/2007	20) 1	1	0	C	0	0	0	0	1	1	1	· ·	1	3 3	FIRE_RISK
2170006	1	0	0.84	0.84	MARMION ST	West	13/11/2007	20	0 0	0	0	C	0 0	0	1	1	0	0	C) ()	1 1	FIRE_RISK
2170007	1	0	0.8	0.8	UPPER CAPEL RD	North	13/11/2007	20) 1	2	1	2	2 1	2	2	2	0	2	2	2 ()	7 10	FIRE_RISK
2170007	2	0.8	1.2	0.4	UPPER CAPEL RD	North	13/11/2007	20	0 0	0	0	C	0 0	0	0	C	0	0	2	2 ()		WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170007	3	1.2	1.6	0.4	UPPER CAPEL RD	North	13/11/2007	20) 1	2	0	C) 1	1	1	1	0	2	2	2 /	1	5 7	AFRICAN_LOVEGRASS
2170007	4	1.6	2.1	0.5	UPPER CAPEL RD	North	13/11/2007	20) 1	2	0	1	1	2	1	1	0	1	2	2 (D	5 7	AFRICAN_LOVEGRASS FIRE_RISK
2170007	5	2.1	2.4	0.3	UPPER CAPEL RD	North	13/11/2007	20	0 0	0	0	C	0	0	0	C	0	0	2	2 2	2		AFRICAN_LOVEGRASS
2170007	6	2.4	2.7	0.3	UPPER CAPEL RD	North	13/11/2007	20	0 0	2	0	1	0	1	0	C	0	2	2	2 (D		AFRICAN_LOVEGRASS
2170007	7	2.7	3.1	0.4	UPPER CAPEL RD	North	13/11/2007	unknown	2	0	0	C	0	0	0	C	0	0	2	2	1		AFRICAN_LOVEGRASS
2170007	8	3.1	3.7	0.6	UPPER CAPEL RD	North	13/11/2007	20	0 0	0	0	C	0	0	0	C	0	0	1	· ·	1	1 1	AFRICAN_LOVEGRASS FIRE_RISK

Road#		Start	OD Finish (km)		Road Name	Direction	Date		Native Vegeta	tion		ent of etation	# Na Pla Spe	nt	We	eds	В			oining duse		nservation lue Score (0-12)	Overlay Data
		(,	()					(m)	Left	Right	Left	Right		Right	Left	Right			_eft	Right	Left		(Listed if Present)
2170007	9	3.7	4.3	0.6	UPPER CAPEL RD	North	13/11/2007	20	2	2	0	2	. 1	2	1	2	0	2	1	1	ł	5 11	FIRE_RISK
2170007	10	4.3	6.9	2.6	UPPER CAPEL RD	North	13/11/2007	20	0	0	0	C	0	0	0	0	0	0	1	1	1	1 1	FIRE_RISK
2170007	11	6.9	8.3	1.4	UPPER CAPEL RD	North	13/11/2007	20	1	0	0	C	0	0	0	0	0	0	1	2	2	2 2	FIRE_RISK
2170007	12	8.3	9.4	1.1	UPPER CAPEL RD	North	13/11/2007	20	1	0	0	C	0	0	0	0	0	0	1	1	2	2 1	WATSONIA FIRE_RISK
2170007	13	9.4	11.6	2.2	UPPER CAPEL RD	North	13/11/2007	20	2	1	1	C	1	1	1	1	0	0	2	1	7		WATSONIA AFRICAN_LOVEGRASS BRIDAL_CREEPER FIRE_RISK
2170007	14	11.6			UPPER CAPEL RD		13/11/2007		0					2	-	2			2		1		AFRICAN_LOVEGRASS FIRE_RISK
2170007	15	12.5			UPPER CAPEL RD		13/11/2007	20				Ŭ	-	0	-	0		0	2				WATSONIA FIRE_RISK
2170007	16	12.9	17.6		UPPER CAPEL RD		13/11/2007	20		0	-	-	-	0	-	0	•	_	2				WATSONIA FIRE_RISK
2170007	17	17.6			UPPER CAPEL RD		13/11/2007			-	Ť		0	0	-	0	0	-	2				WATSONIA FIRE_RISK
2170007	18	22			UPPER CAPEL RD		13/11/2007	20				1	1	2	1	1	1	2	2	2	7		FIRE_RISK
2170007	19	22.5			UPPER CAPEL RD		13/11/2007	20				-	1	2		1	1	1	2	2	7		FIRE_RISK
2170007	20	22.8			UPPER CAPEL RD		13/11/2007		2		_	2	1	2	0	2	0	2	2	0			FIRE_RISK
2170007	21	23.2	25.1	1.9	UPPER CAPEL RD	North	13/11/2007	unknown	2	2	2	2	2	2	2	2	2	2	0	0	10		FIRE_RISK
2170007	22	25.1	25.4	0.3	UPPER CAPEL RD	North	13/11/2007	unknown	1	2	0	2	0	2	1	1	2	2	2	0	(WATSONIA WILD_RADISH TREE_WEEDS FIRE_RISK
2170007	23	25.4	26.2	0.8	UPPER CAPEL RD	North	13/11/2007	unknown	2	2	2	2	2	2	2	2	2	2	0	0	10	0 10	FIRE_RISK
2170007	24	26.2	26.4		UPPER CAPEL RD		13/11/2007	unknown	0	2	0	1	0	2	0	1	0	2	2	0	1	2 8	WATSONIA TREE_WEEDS FIRE_RISK
2170007	25	26.4	26.9	0.5	UPPER CAPEL RD	North	13/11/2007	20	0	0	0	C	0	0	0	0	0	0	0	0	(0 0	
2170008	1	0	0.3		IRISHTOWN RD	East	3/10/2007		2	2	1	C	1	0	1	1	0	1	0	1	ť		WATSONIA AFRICAN_LOVEGRASS BRIDAL_CREEPER BLACKBERRY FIRE_RISK
2170008	2	0.3	0.9		IRISHTOWN RD	East	3/10/2007	20		0	0	C	0	0	0	0	0	0	2	2			AFRICAN_LOVEGRASS TREE_WEEDS FIRE_RISK
2170008	3	0.9			IRISHTOWN RD	East	3/10/2007	20	2	2	0	C	0	0	1	0	2	2	2	2	7		WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170008	4	2.53			IRISHTOWN RD	East	3/10/2007			2	1	1	2	2		2	2	2	1	1	1(BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170008	5	3.2	4.14	0.94	IRISHTOWN RD	East	3/10/2007			2	1	1	2	2	1	1	2	2	1	1	9		WATSONIA FIRE_RISK
2170009		0			RAMSAY TCE	South East	3/10/2007	20	0	0	0	C	0	0	1	1	0	0	0	0	1	1 1	FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta			ent of etation	Pl	ative ant cies	We	eds	В	ue as iol. ridor		oining nduse	Val	servation ue Score (0-12)	Overlay Data
		` '	. ,					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170010	1	0	0.96	0.96	BRIDGE ST	East	3/10/2007	2	0 0) 0	0	C	0 (0	1	1	0	0	0) () 1	1	FIRE_RISK
2170011	1	0	1.07	1.07	ALLNUTT ST	West	3/10/2007	2	0 0) 0	0	C	0 (0	1	1	0	0	0) () 1	1	FIRE_RISK
2170013	1	0	0.48	0.48	UNION ST	South	3/10/2007	2	0 0) 0	0	C	0 (0	1	1	0	0	0) () 1	1	FIRE_RISK
2170016	1	0	1.7		FERGUSON RD	North	1/10/2007	2	0 ^	1	0	C) 0	0	0	0	0	0	2	2	2 3		WILD_RADISH AFRICAN_LOVEGRASS TREE_WEEDS
2170016	2	1.7	2.2	0.5	FERGUSON RD	North	1/10/2007	20		2 2	2	2	2 1	1	2	2	0	0	2	2 2	2 8		AFRICAN_LOVEGRASS
2170016	3		2.4		FERGUSON RD	North	1/10/2007	20				2				2			2				AFRICAN_LOVEGRASS FIRE_RISK
2170016	4	2.4	3	0.6	FERGUSON RD	North	1/10/2007	2	0 2	2 2	1	1	-		2	0	1	2	2	2 2	2 8		FIRE_RISK
2170016	5	3	4.8		FERGUSON RD	North	1/10/2007	20	-	2		1	0	1	1	1	2	2	2	2 2	2 6		WILD_RADISH AFRICAN_LOVEGRASS FIRE_RISK
2170018	1	0	1.47		BROOKHAMPTON RD		15/10/2007			2 2	1		0		1	2	1	1	2	2 2	2 7		WILD_RADISH FIRE_RISK
2170018	2	1.47	2.78	1.31	BROOKHAMPTON RD	North	15/10/2007	20	0 ^	1	0	C	0 0	0	0	0	0	0	2	2	2 3		AFRICAN_LOVEGRASS WATSONIA WILD_RADISH FIRE_RISK
2170018	3	2.78	3.2	0.42	BROOKHAMPTON RD	North	15/10/2007	2	0 2	2 2	1	1	2	2	2	2	1	1	1	1	9	9	AFRICAN_LOVEGRASS AFRICAN_LOVEGRASS FIRE RISK
2170018	4	3.2	4	0.8	BROOKHAMPTON RD	North	15/10/2007	20	0	0	1	C	0 0	0	0	0	0	0	1	1	3		WILD_RADISH WATSONIA BRIDAL_CREEPER FIRE_RISK
2170018	5	4	7.2	3.2	BROOKHAMPTON RD	North	15/10/2007	20	0	1	0	C	0 0	0	0	0	0	0	2	2 1	3		WILD_RADISH TREE_WEEDS WATSONIA BRIDAL_CREEPER FIRE_RISK
2170018	6	7.2	7.6	0.4	BROOKHAMPTON RD	North	15/10/2007	20		1	0	C) 1	1	1	1	0	0	1	C) 4		BRIDAL_CREEPER FIRE_RISK
2170018	7	7.6	13		BROOKHAMPTON RD		15/10/2007	20		0		C	0 0	0	0	0		0	1	1	2		WILD_RADISH FIRE_RISK
2170018	8		13.4		BROOKHAMPTON RD		15/10/2007			2 2		2		2		2		1	1	C			WILD_RADISH FIRE_RISK
2170018	9		14.1		BROOKHAMPTON RD		15/10/2007			2		1	1	1	1	2		1	1	1	Ŭ		FIRE_RISK
2170018	10		14.7		BROOKHAMPTON RD		15/10/2007	20								2			2				FIRE_RISK
2170018	11		15.5		BROOKHAMPTON RD		15/10/2007	20								2		1	0				WATSONIA FIRE_RISK
2170018	12	15.5	16.2	0.7	BROOKHAMPTON RD	South	15/10/2007	20	0 2	2 2	1	1	2	2	1	1	2	2	2	2 2	2 10	10	WILD_RADISH FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta			ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. ridor	-	oining duse	Valu	servation ue Score 0-12)	Overlay Data
		、 /	``					(m)	Left	Right	Left	Right			Left	Right	Left	Right	Left	Right			(Listed if Present)
2170018	13	16.2	_		BROOKHAMPTON RD		15/10/2007	20	2	1	2	2 1	2	1	2	2	2 2	0	0	0	10		WILD_RADISH FIRE_RISK
2170018	14	17.6			BROOKHAMPTON RD		15/10/2007	20		_		2 2			_		2 2	2	2	2	10		AFRICAN_LOVEGRASS FIRE_RISK
2170018	15	17.6			BROOKHAMPTON RD		15/10/2007	20		2	2	2 2	2 2	2	2	2	2 2	2	2	2	10		FIRE_RISK
2170018	16	18		0.22	BROOKHAMPTON RD	South	15/10/2007	20		0	0) (0 0	0	0	(0 0	0	0	0	0		AFRICAN_LOVEGRASS FIRE_RISK
2170019	1	0	2.3	2.3	SANDHILLS RD	South	15/10/2007	20) 1	1	C) () 0	0	0	0	0 0	0	2	2	3		AFRICAN_LOVEGRASS WATSONIA WILD_RADISH BRIDAL_CREEPER FIRE_RISK
2170019	2	2.3	2.77	0.47	SANDHILLS RD	South	15/10/2007	20	0	0	0 0) () 0	0	0	(0 0	0	2	2	2		AFRICAN_LOVEGRASS WILD_RADISH BRIDAL_CREEPER FIRE_RISK
2170019	3	2.77	3.2	0.43	SANDHILLS RD	South	15/10/2007	20	1	1	1	0) 1	0	1	() 2	0	0	2	6		AFRICAN_LOVEGRASS WATSONIA FIRE_RISK
2170019	4	3.2	5.8	2.6	SANDHILLS RD	South	15/10/2007	20	2	2	2	2 2	2 2	2	2	2	2 2	2	0	0	10	10	AFRICAN_LOVEGRASS
2170019	5	5.8	6.2	0.4	SANDHILLS RD	South	15/10/2007	20	2	1	1	1	1	1	1	1	I 0	0	0	0	5	4	AFRICAN_LOVEGRASS
2170020	1	0	0.7		HURST RD	North	2/10/2007	20		2	2 0) 2	2 1	2	2	2	2 0	2	1	0	6	10	BRIDAL_CREEPER
2170020	2	0.7	0.9	0.2	HURST RD	North	2/10/2007	20	2	2	2 0) 1	1	1	2	2	2 0	2	1	1	6	9	
2170020	3	0.9	1.3	0.4	HURST RD	North	2/10/2007	20		2	: 1	1	1	1	2	2	2 0	0	0	1	6	7	
2170020	4	1.3	2.3	1	HURST RD	North	2/10/2007	20		2	: 1	1	1	1	0	(0 0	0	1	1	5	5	BRIDAL_CREEPER
2170020	5	2.3	2.8	0.5	HURST RD	North	2/10/2007	20	2	2	: 1	2	2 1	2	1	2	2 0	0	1	0	6	8	
2170020	6	2.8	2.9	0.1	HURST RD	North	2/10/2007	20	2	2	: 1	1	1	1	1	2	2 0	1	1	0	6	7	
2170020	7	2.9	3.99	1.09	HURST RD	North	2/10/2007	20	2	2	: 1	2	2 1	2	2	2	2 0	2	1	0	7	10	
2170021	1	0	0.34	0.34	CORA ST	South	2/10/2007	20	0 0	0	0 0) (0 0	0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170022	1	0	0.79	0.79	CEMETERY RD	South	2/10/2007	20	0 0	0	0 0) (0 0	0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170024	1	0	0.48		YELVERTON ST SOUTH	East	2/10/2007	20		0	0) (0 0	0	1	1	0	0	0	0	1		FIRE_RISK
2170025	1	0	0.76	0.76	TRIGWELL ST	South	2/10/2007	20	0 0	0	0 0) (0 0	0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170027	1	0	1.7	1.7	KING SPRING RD	East	2/10/2007	20	1	1	1	1	0	0	1	1	0	0	1	1	4	4	WATSONIA TREE_WEEDS
2170027	2	1.7	2.1	0.4	KING SPRING RD	East	2/10/2007	20	0 0	1	0) (0 0	0	0	1	I 0	0	1	1	1	3	WATSONIA
2170027	3	2.1	2.5	0.4	KING SPRING RD	East	2/10/2007	20	1	0	1	0) 1	0	1	(0 (0	1	1	5	1	
2170027	4	2.5	3	0.5	KING SPRING RD	East	2/10/2007	20	0 0	0	0) () 0	0	0	(0 (0	1	1	1	1	AFRICAN_LOVEGRASS
2170027	5	3		0.3	KING SPRING RD	East	2/10/2007	20		1	0) () 0	0	0	() 1	1	1	1	3		AFRICAN_LOVEGRASS
2170027	6	3.3	4	0.7	KING SPRING RD	East	2/10/2007	20	1	1	0) () 0	0	0	(0 0	0	1	1	2	2	AFRICAN_LOVEGRASS

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta			ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. ridor		oining nduse		nservation lue Score (0-12)	Overlay Data
		、 ,	, ,					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Righ	t Left	Right	(Listed if Present)
2170027	7	4	5.3	1.3	KING SPRING RD	East	2/10/2007	20) 1	1	0) () 1	1	1	1	0	0	1		1	4 4	WATSONIA BRIDAL_CREEPER
2170027	8	5.3	5.7	0.4	KING SPRING RD	East	2/10/2007	20) C	0 0	0) (0 0	0	0	0	0	0	2	2	2	2 2	
2170028	1	0	0.32	0.32	UNION ST SOUTH	South	2/10/2007	20) C	0 0	0) (0 (0	1	1	0	0	0)	0	1 1	FIRE_RISK
2170029	1	0	2	2	2 LOWDEN GRIMWADE RD	South East	2/10/2007	20) 1	1	1	1	1	1	1	1	0	0	1		1	5 5	AFRICAN_LOVEGRASS TREE_WEEDS FIRE_RISK
2170029	2	2	4	2	2 LOWDEN GRIMWADE RD	South East	2/10/2007	20		2	0		1	1	1	1	0	0	1		1		WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170029	3	4	4.3		BLOWDEN GRIMWADE RD	South East	2/10/2007	20	0 0	0 0	0) () 1	0	1	1	0	0	1		0		AFRICAN_LOVEGRASS FIRE_RISK
2170029	4	4.3	4.7	0.4	LOWDEN GRIMWADE RD	South East	2/10/2007	20) C	0 0	0) (0 0	0	0	0	0	0	1		1	1 1	AFRICAN_LOVEGRASS FIRE_RISK
2170029	5	4.7	5.2	0.5	LOWDEN GRIMWADE RD	South East	2/10/2007	unknown	2	2 2	1	1	2	2	2	2	2	2	. 1		1 1	0 10	WATSONIA FIRE_RISK
2170029	6	5.2	8.9	3.7	LOWDEN GRIMWADE RD	South East	2/10/2007	unknown	2	2 2	2	2 2	2 2	2	2	2	2	2	: C)	0 1		FIRE_RISK
2170029	7	8.9	9.5	0.6	LOWDEN GRIMWADE RD	South East	2/10/2007	unknown	2	2 2	2	2 2	2 2	2	2	2	2	2	: C)	1 1	0 11	FIRE_RISK
2170029	8	9.5	19.7	10.2	LOWDEN GRIMWADE RD	South East	2/10/2007	unknown	2	2 2	2	2 2	2 2	2	2	2	2	2	()	0 1	0 10	TREE_WEEDS FIRE_RISK
2170030	1	0	0.3	0.3	CHESTNUT DR	East	10/11/2007	20) C	1	0) (0 0	0	0	0	0	0	0)	1	0 2	WATSONIA TREE_WEEDS FIRE_RISK
2170030	2	0.3	3.05	2.75	CHESTNUT DR	East	10/11/2007	20) C	0 0	0) (0 0	0	0	0	0	0	2	2	1		WATSONIA TREE_WEEDS FIRE_RISK
2170031	1	0	1.35	1.35	BENDALL RD	North	2/10/2007	20) 1	1	0) (0 0	0	0	0	0	0	0) (0		WATSONIA BRIDAL_CREEPER TREE_WEEDS
2170032	1	0	0.89		FLEET ST	South	2/10/2007	20	0 0	0 0	0) (0 0	0	1	1	0	0	0)	0		FIRE_RISK
2170034	1	0	1.5	1.5	FARLEY RD	North East	13/11/2007	unknown	2	2 2	2	2 2	2 2	2	2	2	2	2	: C)	0 1	0 10	FIRE_RISK
2170034	2	1.5	2.7	1.2	2 FARLEY RD	North East	13/11/2007	unknown	C	2	0) 2	2 0	2	2	2	0	2	2	2	0	4 10	FIRE_RISK
2170034	3	2.7	4.96	2.26	FARLEY RD	North East	13/11/2007	unknown	2	2 2	2	2 2	2 2	2	2	2	2	2	: C)	0 1		FIRE_RISK
2170035	1	0	0.8	0.8	ATHERTON RD	South	13/11/2007	20) 2	2 2	1	1	2	2	1	2	1	1	1		1	8 9	FIRE_RISK
2170035	2	0.8	1.5	0.7	ATHERTON RD	South	13/11/2007	20) C	0 0	0) () 0	0	0	0	-	0	1		1		TREE_WEEDS FIRE_RISK
2170035	3	1.5	2.39	0.89	ATHERTON RD	South	13/11/2007	20) 1	1	1	1	1	1	1	1	0	0	1		1	5 5	FIRE_RISK
2170036	1	0	1.9	1.9) old Brookhampton Rd	South	13/11/2007	20) 2	2 2	1	1	2	2	2	2	2	2	: 1		1 1	0 10	TREE_WEEDS

Road#			OD Finish (km)		Road Name	Direction	Date	Width	Native Vegeta			ent of etation	P	ative lant ecies	W	eeds	В	ue as iol. ridor	Adjo Lan	oining Iduse	Val	servation ue Score (0-12)	Overlay Data
		` '						(m)	Left	Right	Left	Right			Left	Right			Left	Right			(Listed if Present)
2170040	1	0	0.2	0.2	ARGYLE RD	North East	2/10/2007	20) 2	2	: 1	I C) 1	1	1	1	1	1	1	0	7	5	WATSONIA AFRICAN_LOVEGRASS
2170040	2	0.2	0.9	0.7	ARGYLE RD	North East	2/10/2007	20) 2	2 0	1	I C) 1	1	1	1	1	1	2	2	2 8	5	WATSONIA AFRICAN_LOVEGRASS
2170040	3	0.9	1.1	0.2	ARGYLE RD	North East	2/10/2007	20) 1	0	C) C) C	0 0	0	0	0	0	2	2	2 3	2	
2170040	4	1.1	1.3		ARGYLE RD	North East	2/10/2007	20		0	C) (0 0	0 0	0	0	0	0	2	2	2 2		WATSONIA BRIDAL_CREEPER
2170040	5	1.3	1.53		ARGYLE RD	North East	2/10/2007	20	0 0	0	C) (0 0	0 0	0	0	0	0	2	0	2		AFRICAN_LOVEGRASS
2170041	1	0	0.2		JARRAHWOOD RD	South	29/11/2007		2	2	2	2 2	2 2	2 2	2	2	2	2	2	0	12		FIRE_RISK
2170041	2	0.2	0.4		JARRAHWOOD RD	South	29/11/2007	unknown	2	2 0	2	2 0) 2	2 0	2	2	2	0	0	1	10	3	FIRE_RISK
2170041	3	0.4	4	3.6	JARRAHWOOD RD	South	29/11/2007	unknown	2	2	2	2 2	2 2	2 2	2	2	2	2	0	0	10	10	FIRE_RISK
2170045	1	0	0.6	0.6	TREVENA RD	North	29/11/2007	20) 2	2	2 1	1	1	1	1	1	0	0	2	2	2 7	7	FIRE_RISK
2170045	2	0.6	1	0.4	TREVENA RD	North	29/11/2007	20) C	0	0 0) (0 0	0 (0	0	0	0	2	2	2 2	2	FIRE_RISK
2170045	3	1	1.3	0.3	TREVENA RD	North	29/11/2007	20) 1	1	1	1 1	1	1	1	1	0	0	1	1	5	5	FIRE_RISK
2170045	4	1.3	1.8	0.5	TREVENA RD	North	29/11/2007	20) C	0	C) C) C	0 0	1	1	0	0	1	1	2	2	TREE_WEEDS FIRE_RISK
2170045	5	1.8	2.1	0.3	TREVENA RD	North	29/11/2007	20) 2	2	: 1	I 1	1	1	2	2	0	0	1	1	7	7	FIRE_RISK
2170045	6	2.1	2.9	0.8	TREVENA RD	North	29/11/2007	20) 2	2	: 1	1 1	1	1	1	1	0	0	1	1	6	6	FIRE_RISK
2170045	7	2.9	3.4	0.5	TREVENA RD	North	29/11/2007	20) 2	2	: 1	1 1	1 2	2 2	2	2	0	0	1	1	8	8	FIRE_RISK
2170045	8	3.4	3.8	0.4	TREVENA RD	North	29/11/2007	20) 2	2	: 1	1 2	2 2	2 2	2	2	0	2	1	0	8	10	FIRE_RISK
2170045	9	3.8	5.5	1.7	TREVENA RD	North	29/11/2007	unknown	2	2	2 2	2 2	2 2	2 2	2	2	2	2	0	0	10	10	FIRE_RISK
2170046	1	0	2.1	2.1	MANDALAY RD	South	29/11/2007	20) 1	1	C) C) C	0 0	1	1	1	1	2	2	2 5	5	AFRICAN_LOVEGRASS TREE_WEEDS FIRE RISK
2170046	2	2.1	5.17	3.07	MANDALAY RD	South	29/11/2007	20	C	0	C) () C	0 0	0	0	0	0	1	1	1	1	AFRICAN_LOVEGRASS WILD_RADISH TREE_WEEDS FIRE_RISK
2170047	1	0	0.31	0.31	NEEDES HILL RD	East	11/11/2007	unknown	2	2	c C) 2	2 0) 2	1	1	1	2	2	0	6	9	AFRICAN_LOVEGRASS FIRE_RISK
2170047	2	0.31	0.58	0.27	NEEDES HILL RD	East	11/11/2007	unknown	C	2	c C) 2	2 1	2	0	1	0	2	2	0	3	9	AFRICAN_LOVEGRASS FIRE_RISK
2170047	3	0.58	0.83	0.25	NEEDES HILL RD	East	11/11/2007	unknown	C	1	C) 1	1	1	0	0	0	2	2	2	2 3	7	WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170047	4	0.83	1.15	0.32	NEEDES HILL RD	East	11/11/2007	unknown	2	2	2 2	2 2	2 2	2 2	2	2	2	2	0	0	10	10	AFRICAN_LOVEGRASS
2170048	1	0	0.7	0.7	ATWOOD RD	South	11/11/2007	20) 2	2	: 1	1	1	1	1	1	2	2	2	1	9	8	
2170048	2	0.7	1.7	1	ATWOOD RD	South	11/11/2007	20) 2	2	2 2	2 2	2 2	2 2	2	2	2	2	1	1	11	11	

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. ridor		oining Iduse		nservation lue Score (0-12)	Overlay Data
		. ,						(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170048	3	1.7	2.6	0.9	ATWOOD RD	South	11/11/2007	20) 2	2	: 1	1	2	2 2	1	1	0	0	1	1	1	7 7	TREE_WEEDS
2170048	4	2.6	2.8	0.2	ATWOOD RD	South	11/11/2007	20) 1	1	0	C	0 0	0 0	0	C	0 0	0	1	1		2 2	TREE_WEEDS
2170048	5	2.8	3.3	0.5	ATWOOD RD	South	11/11/2007	20) 2	1	1	C) 1	0	2	1	0	0	1	1	1	7 3	
2170049		0	0.3	0.3	BOWMAN RD	North	11/11/2007	20		0	0	0 0	0 0	0 0	0	C	0 0	0	1	1			WATSONIA BLACKBERRY TREE_WEEDS FIRE_RISK
2170049	2	0.3	0.8	0.5	BOWMAN RD	North	11/11/2007	20		1	0	C	0 0	0 0	0	C	0 0	0	1	1			WATSONIA BLACKBERRY FIRE_RISK
2170049	3	0.8	1.4	0.6	BOWMAN RD	North	11/11/2007	20	0 0	1	0	C	0 0	0 0	0	C	0	0	1	1		1 2	WATSONIA TREE_WEEDS FIRE_RISK
2170049	4	1.4	2.25	0.85	BOWMAN RD	North	11/11/2007	20) 2	2	: 1	1	2	2 2	2	2	2 2	2	0	1	9	9 10	FIRE_RISK
2170050	1	0	0.41	0.41	ELLIOTT ST	North	11/11/2007	20		0	0 0	C	0 0	0 0	1	1	0	0	0	0) ·	1 1	FIRE_RISK
2170051	1	0.15	1.15	1	PUGSLEY RD	North	1/10/2007	20		0	0 0	C	0 0	0 0	2	2	2 1	0	2	2	2 (6 4	
2170052	1	0	•	0.2	FOREST RD	North East	1/10/2007	20		2	: 1	1	1	1	1	1	0	0	1	C) ;	5 5	
2170052	2	0.2	3.14	_	FOREST RD	North East	1/10/2007	20		0	0	C	0 0	0 0	0	C	0 0	0	1	1			AFRICAN_LOVEGRASS TREE_WEEDS
2170053	1	0		0.5	GOLDFIELDS	East	6/10/2007	20) 1	1	0	C) 1	1	0	C	0 1	1	2	2	2 4		TREE_WEEDS AFRICAN_LOVEGRASS WILD_RADISH
2170053	2	0.5			GOLDFIELDS	East	6/10/2007	20				0		•	0	C	-	-	2	2	2 (WATSONIA
2170053	3	0.8	2.2		GOLDFIELDS	East	6/10/2007	20		2	1	1	2	2 2	1	1	1	1	1	1	1		WATSONIA FIRE_RISK
2170054	1	0	0.37		PRESTON PARK RD	North	6/10/2007	20		0	0	C	0 0	0 0	0	C	0 0	0	2	2	2 2		WATSONIA FIRE_RISK
2170055		0			MARSHALL RD	West	2/10/2007	20	-	-	-	0 0	0 0	0 0	0	C	0 0	0	0	C			FIRE_RISK
2170055					MARSHALL RD	West	2/10/2007	20				2		-	1	1		1	1	C			FIRE_RISK
2170055	3	1.7	-		MARSHALL RD	West	2/10/2007	20		1	Ũ) 1	1	1			1			4 5	
2170055		2.75			MARSHALL RD	West	2/10/2007	20				2	2 1	2	1	-				C		6 10	
2170055					MARSHALL RD	West	2/10/2007	20						2	2	2	2 1	2		C			FIRE_RISK
2170055	6	3.25		0.25	MARSHALL RD	West	2/10/2007	20) 2	2	2	2 2	2 2	2 2	1	1	1	2	0	C) 8		FIRE_RISK
2170055	7	3.5	4.28	0.78	MARSHALL RD	West	2/10/2007	20	0 0	0	0	C	0 0	0 0	0	C	0 0	0	2	2	2 2		AFRICAN_LOVEGRASS FIRE_RISK
2170056	1	0			TRIGWELL RD	North East	6/10/2007	C		1	Ů	-			Ŭ	-							FIRE_RISK
2170057	1	0			MITCHELL RD	West	6/10/2007	20	_			C						0					AFRICAN_LOVEGRASS FIRE_RISK
2170057	2	1	1.6	0.6	MITCHELL RD	West	6/10/2007	C	2	2	1	1	2	2 1	2	2	2 2	1	0	2	2	99	AFRICAN_LOVEGRASS FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	ition		ent of etation	Pla	ative ant cies	Wee	ds	В	ue as iol. ridor		oining nduse	Valu	servation ue Score 0-12)	Overlay Data
		` '	· /					(m)	Left	Right	Left	Right			Left Ri	ight	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170057	3	1.6	2.4		MITCHELL RD	West	6/10/2007	0	2	2	2	2	2 2	2	2	2	2	2	0	0 0	10	10	AFRICAN_LOVEGRASS FIRE_RISK
2170057	4	2.4	3.37	0.97	MITCHELL RD	West	6/10/2007	0	0	0	0	C	0 (0	0	0	0	0	2	2 2	2 2	2	FIRE_RISK
2170059	1	0	0.6	0.6	B DHU RD	South	13/11/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0) 0	10	10	FIRE_RISK
2170059	2	0.6	0.82	0.22	2 DHU RD	South	13/11/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	2	2 1	12	11	FIRE_RISK
2170061	1	0	0.7	0.7	GRIST RD	South	13/11/2007	20	2	2	1	C) 1	1	1	1	1	1	2	2 2	2 8	7	AFRICAN_LOVEGRASS FIRE_RISK
2170061	2	0.7	1.89	1.19	GRIST RD	South	13/11/2007	unknown	2	2	0	C) 0	0	0	0	2	2	2	2 2	2 6	6	AFRICAN_LOVEGRASS WILD_RADISH TREE_WEEDS FIRE_RISK
2170065	1	0	2.18	2.18	TOWERS RD	East	13/11/2007	20	1	1	1	1	2	2	2	2	0	0	2	2 2	2 8		BLACKBERRY TREE_WEEDS FIRE_RISK
2170068	1	0	0.8	0.8	3 TASSONE RD	West	13/11/2007	20	2	1	2	1	2	1	2	1	2	1	0) 1	10	6	FIRE_RISK
2170068	2	0.8	1.46		TASSONE RD	West	13/11/2007	20			0	C	_	2	-	0	2	1	2	2 2	2 8		WATSONIA FIRE_RISK
2170069	1	0	1.37	1.37	BYRON RD	South	13/11/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0 0) 10		FIRE_RISK
2170069	2	1.37	1.74	0.37	BYRON RD	South	13/11/2007	0		2	2	2	2 2	2	2	2	2	2	1	0) 11		WATSONIA FIRE_RISK
2170072	1	0	0.91		HOLM RD	East	13/11/2007	20	0	0	0	C	0 0	0	0	0	0	0	2	2 2	2 2		WILD_RADISH FIRE_RISK
2170073	1	0	0.76		GARDINER RD	North	13/11/2007	20	1	2	1	1	1	1	1	1	1	1	2	2 0) 7	6	FIRE_RISK
2170074	1	0		1.2	2 YABBERUP RD	North	13/11/2007	20	0	0	0	C	0 0	0	0	0	0	0	1	1	1		FIRE_RISK
2170074	2	1.2	1.9	-	YABBERUP RD	North	13/11/2007	20	-	1	0	0	0 0	0	0	1	0	0	1	1	1		FIRE_RISK
2170076	1	0	0.36	0.36	GIUDICI RD	North	13/11/2007	20		1	1	1	0	0		1	0	0	2	2 2	2 5		FIRE_RISK
2170079	1	0	1	1	CHAMPMAN RD	South	13/11/2007	20	2	2	1	1	2	2	2	2	1	1	1	2	9	10	WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170079	2	1	1.61	0.61	CHAMPMAN RD	South	13/11/2007	20	0	0	0	C	0 0	0	0	0	0	0	1	1	1		WILD_RADISH FIRE_RISK
2170080	1	0			FIELDS RD	West	13/11/2007		2					0		2		0	0				TREE_WEEDS FIRE_RISK
2170080	2		1.98		FIELDS RD	South West	13/11/2007		2				2	1	2	2		1	0				FIRE_RISK
2170086	1	0	0.5		GEMMEL RD	North East	2/10/2007	20		0				0		0	0	0	1	0		0	
2170086	2	0.5	1.2		GEMMEL RD	North East	2/10/2007	20		1	0	C		0	-	0	0	0	1	1	2		BRIDAL_CREEPER
2170086	3				GEMMEL RD	North East	2/10/2007	20	_		-	-		0	-	0	-	0	1	1			AFRICAN_LOVEGRASS
2170087	1	0	1.2		TORRIDON RD	West	6/10/2007	0		2		2		2		2		1	0				FIRE_RISK
2170087	2	1.2	2.37		TORRIDON RD	West	6/10/2007	0		1	0	-	-	0	-	0	0	0	0	-	-		FIRE_RISK
2170089	1	0	0.2	0.2	VERNON RD	South	29/11/2007	20	1	2	0	2	2 0	2	1	2	0	2	1	1	3	11	FIRE_RISK

Road#	Sect#		OD Finish (km)		Road Name	Direction	Date	Width	Nativ Vege		_	ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. rridor		oining Iduse	Val	servation lue Score (0-12)	Overlay Data
		()	()					(m)	Left	Right	Left	Right		Right	Left	Right			Left	Right			(Listed if Present)
2170089	2	0.2	0.6	0.4	VERNON RD	South	29/11/2007		0	1 2	2 0) 2	2 0	2	1	2	0	2	1	0	3	3 10	FIRE_RISK
2170089	3	0.6	0.8	0.2	VERNON RD	South	29/11/2007		0	0 2	2 0) 2	2 0	2	1	2	0	2	1	0	2	2 10	FIRE_RISK
2170089	4	0.8	2.4	1.6	VERNON RD	South	29/11/2007		0	2 2	2 1	2	2 1	2	2	2	1	2	1	0	8	3 10	FIRE_RISK
2170089	5	2.4	5.25	2.85	VERNON RD	South	29/11/2007		0	2 2	2 2	2 2	2 2	2	2	2	2	2	0	0	10) 10	FIRE_RISK
2170096	1	0	1.31	1.31	LYONS RD	East	29/11/2007		20	0 1	0) (0 0	0	0	0	0	0	1	1	1		BLACKBERRY FIRE_RISK
2170098	1	0	0.8	0.8	LEACH RD	South	29/11/2007		20	2 2	2 1	1	1	1	1	1	1	1	2	. 1	8	3 7	TREE_WEEDS
2170099	1	0	1.2		BENTLEY RD	East	29/11/2007		20	2 2	2 1	1	1	1	1	2	0	0	2	1	7		AFRICAN_LOVEGRASS FIRE_RISK
2170100	1	0	0.45		EGAN ACCESS RD		29/11/2007		20	0 0	0 0) (0 0	0	1	1	0	0	0	0			FIRE_RISK
2170102	1	0	0.6		MORRISEY RD	South	29/11/2007			2 2	2 2	2 2	2 2	2	2	2	2	2	0	0	10) 10	
2170102	2	0.6	2.2	1.6	MORRISEY RD	South	29/11/2007		20	1 1	0) (0 0	0	1	1	1	1	1	1	4	4	
2170102	3	2.2	3.5	1.3	MORRISEY RD	South	29/11/2007		20	2 2	2 1	1	1 2	2	2	2	1	1	1	1	9	-	
2170103	1	0	0.4	0.4	WADE RD	South	15/10/2007		0	0 1	0) 1	1	1	0	1	0	0	1	0	2		WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170103	2	0.4	0.8	0.4	WADE RD	South	15/10/2007		0	2 2	2 1	1	2	2	2	2	1	1	2	2	g	8	WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170103	3	0.8	1.2	0.4	WADE RD	South	15/10/2007		0	2 2	2 1	1	2	2	2	2	0	0	2	2	8	3 9	AFRICAN_LOVEGRASS
2170103	4	1.2	1.6	0.4	WADE RD	South	15/10/2007		0	2 2	2 2	2 2	2 2	2	2	2	1	1	0	0	9) 9	FIRE_RISK
2170103	5	1.6	2	0.4	WADE RD	South	15/10/2007		0	1 1	1	1	2	. 1	1	1	0	0	2	2	6	6 6	FIRE_RISK
2170103	6	2	2.6	0.6	WADE RD	South	15/10/2007		0	2 2	2 2	2 2	2 2	2	2	2	1	1	2	2	10) 10	FIRE_RISK
2170103	7	2.6	3.19	0.59	WADE RD	South	15/10/2007		0	2 1	1	0) 1	0	1	0	1	0	2	2	8		AFRICAN_LOVEGRASS FIRE_RISK
2170104	1	0	0.2	0.2	THOMSON RD	South	15/10/2007		20	2 2	2 1	2	2 2	2	2	2	1	1	1	1	9) 10	
2170104	2	0.2	1.4	1.2	THOMSON RD	South	15/10/2007		20	1 1	0) () 1	1	2	2	0	0	1	0	5	5 4	
2170104	3	1.4	2.16	0.76	THOMSON RD	South	15/10/2007		20	2 2	2 2	2 2	2 2	2	2	2	2	2	1	1	11	11	FIRE_RISK
2170107	1	0	0.48	0.48	EGAN ST	South	15/10/2007		20	0 0	0 0) (0 0	0	1	1	0	0	0	0	1	1	FIRE_RISK
2170108	1	0	0.58	0.58	SHORT ST	South	15/10/2007		20	0 0	0 0) (0 0	0	1	1	0	0	0	0	1	1	FIRE_RISK
2170110	1	0	1.9	1.9	KELLY ST	North	15/10/2007		20	0 0	0 0) (0 0	0	1	1	0	0	0	0	1	1	FIRE_RISK
2170112	1	0	0.76		TRIGWELL ST EAST	East	15/10/2007		20	0 0	0 0) (0 0	0	1	1	0	0	0	0	1	1	FIRE_RISK
2170113	1	0	0.72	0.72	CAIN RD	East	15/10/2007		20	0 1	0) (0 0	0	0	1	0	0	1	1	1	3	FIRE_RISK
2170114	1	0	0.23	0.23	HUNTER ST	North	15/10/2007		20	0 0	0 0) () 0	0	1	1	0	0	0	0	1	1	FIRE_RISK
2170116	1	0	0.2	0.2	BLIGH ST	South	15/10/2007		20	1 1	0) (0 0	0	0	0	0	0	0	0	1		WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170117	1	0	1	1	RYALLS RD	West	6/10/2007		0	2 2	2 2	2 2	2 2	2	2	2	2	2	0	0	10) 10	FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	Р	lative lant ecies	W	eeds	В	ue as iol. ridor		oining Iduse	Val	servation ue Score (0-12)	Overlay Data
		. ,	. ,					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170117	2	1	3.37	2.37	RYALLS RD	West	6/10/2007	0	2	2	2 2	2 1	1 2	2 2	2	1	2	2	1	0	11	8	WATSONIA FIRE_RISK
2170117	3	3.37	4.9	1.53	RYALLS RD	West	6/10/2007	0	2	2	2 2	2 2	2 2	2 2	2	2	2	2	1	0	11	10	WATSONIA FIRE_RISK
2170117	4	4.9	6	1.1	RYALLS RD	West	6/10/2007	0	2	2	2 0) 1	1 2	2 2	0	0	0	1	1	1	5	7	WATSONIA FIRE_RISK
2170117	5	6	6.6	0.6	RYALLS RD	West	6/10/2007	0	0	0	0) C) (0 0	0	0	0	0	1	1	1	1	WILD_RADISH FIRE_RISK
2170117	6	6.6	7.4		RYALLS RD	West	6/10/2007	0	1	1	0) () 2	2 2	! 1	1	0	0	1	1	5		WILD_RADISH FIRE_RISK
2170117	7	7.4	8.1		RYALLS RD	West	6/10/2007	0	0	0	0) C) (0 0	0	0	0	0	1	1	1	1	FIRE_RISK
2170117	8	8.1	9.1	1	RYALLS RD	West	6/10/2007	0	0	0	0) C) (0 0	0	0	0	0	1	1	1		FIRE_RISK
2170117	9	9.1	10.3		RYALLS RD	West	6/10/2007	0	0	0	0) C) (0 0	0	0	0	0	1	1	1		FIRE_RISK
2170117	10	10.3	10.74	0.44	RYALLS RD	West	6/10/2007	0	2	0	1	C) 2	2 0	1	0	0	0	1	1	7		FIRE_RISK
2170118	1	0	0.5	0.5	THOMAS RD	West	6/10/2007	20	1	2	2 0) 1	I () 2	0	2	0	2	1	1	2	10	FIRE_RISK
2170118	2	0.5	1.7	1.2	THOMAS RD	West	6/10/2007	20		0	0 0) C) (0 0	1	1	1	0	1	1	4	2	FIRE_RISK
2170118	3	1.7	3.4	1.7	THOMAS RD	West	6/10/2007	20	1	1	0) C) (0 0	1	1	1	1	1	1	4	4	FIRE_RISK
2170118	4	3.4	3.89	0.49	THOMAS RD	West	6/10/2007	20	2	2	: 1	C) 2	2 1	2	1	1	0	1	1	9	5	
2170119		0			NIEUWENHUYZE RD	South West	6/10/2007	20		2	: 1	2	2	1 2	2	2	0	2	1	0	7		FIRE_RISK
2170119		0.5			NIEUWENHUYZE RD	South West	6/10/2007	20) 2		2	2 1	2		2		0	2		TREE_WEEDS FIRE_RISK
2170119	3	0.9			NIEUWENHUYZE RD	South West	6/10/2007	20						0 0	Ŭ			0			1		FIRE_RISK
2170121	1	0			CLAYMORE RD	West	13/11/2007	20		1	0			0 0	Ŭ	-		0			-		WATSONIA FIRE_RISK
2170121	2	1.1	4.2		CLAYMORE RD	West	13/11/2007		2					2 2	_			2					FIRE_RISK
2170121	3	4.2			CLAYMORE RD	West	13/11/2007		2	2		_		2 2				2		0	11		FIRE_RISK
2170123	1	0			WHITE RD	South	13/11/2007		2	2		2 2		2 2	2			2	0	0	10		FIRE_RISK
2170123	2	0.3			WHITE RD	South	13/11/2007		_	2		2 1		2 1	2			1	0	1	10		FIRE_RISK
2170123	3	5	6.05	1.05	WHITE RD	South	13/11/2007	0	2	2	2	2 2	2 2	2 2	2	2		2	0	0	10		FIRE_RISK
2170124	1	0	1.54	1.54	NEWLANDS RD	South	6/10/2007	0	2	0	1	C) 2	2 2	2	0	2	0	2	2	11		WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170124	2	1.54	3.14	1.6	NEWLANDS RD	South	6/10/2007	0	2	2	2 2	2 2	2 2	2 2	2	2	1	2	1	0	10	10	FIRE_RISK
2170127	1	0	0.5	0.5	KIRUP- GRIMWADE RD	East	29/11/2007	unknown	2	2	2	2	2 2	2 2	2	2	2	2	0	0	10	10	WATSONIA AFRICAN_LOVEGRASS FIRE RISK
2170127	2	0.5	1	0.5	KIRUP- GRIMWADE RD	East	29/11/2007	20	1	0	0) C) (0 0	1	0	0	0	2	1	4		WATSONIA FIRE_RISK
2170127	3	-	1.3		KIRUP- GRIMWADE RD	East	29/11/2007	20		1	0) 1	1 () 1	1	1	0	0	2	1	4		FIRE_RISK
2170127	4	1.3	1.6	0.3	KIRUP- GRIMWADE RD	East	29/11/2007	20	0	1	0) 1	· ·	1 1	1	1	0	0	2	1	4	5	WATSONIA FIRE_RISK

Road#	Sect#	Start	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. ridor		oining Iduse	Val	servation ue Score (0-12)	Overlay Data
		` '	` '					(m)	Left	Right	Left	Right		Right	Left	Right	Left	Right	Left	Right		Right	(Listed if Present)
2170127	5	1.6	3.1	1.5	KIRUP- GRIMWADE RD	East	29/11/2007		2	2	2	2	2	2 2	2	2	0	0	0	0	8		WATSONIA FIRE_RISK
2170127	6	_	3.8	_	KIRUP- GRIMWADE RD	East	29/11/2007		2	0	2	2 0	2	2 0	2	0	0	0	0	2	8		AFRICAN_LOVEGRASS FIRE_RISK
2170127	7	3.8	4.2	0.4	KIRUP- GRIMWADE RD	East	29/11/2007	unknown	0	2	1	1	1	2	0	1	0	0	1	0	3	6	WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170127	8	4.2	4.7	0.5	KIRUP- GRIMWADE RD	East	29/11/2007	20	0	1	1	0	1	0	0	0	0	0	1	2	3	3	AFRICAN_LOVEGRASS FIRE_RISK
2170127	9	4.7	13.62		KIRUP- GRIMWADE RD	East	29/11/2007		2	2	2	2	2	2 2	2	2	2	2	0	0	10		TREE_WEEDS FIRE_RISK
2170128	1	0	1.6	1.6	WISHART RD	North	29/11/2007		2			2 2	2					2	0	0	10		FIRE_RISK
2170129	1	0	2.82		ANDERSON RD	North	29/11/2007		2	_	2	2	2	2 2	2	2	2	2	0	0	10		BLACKBERRY FIRE_RISK
2170130	1	0	0.9		JAYES RD	East	29/11/2007	20		0	0	0	0	0 0	0	0	0	0	0	0	0		FIRE_RISK
2170130		0.9	1.5		JAYES RD	East	29/11/2007	20		0		0				0	0	0	1	1	1		TREE_WEEDS FIRE_RISK
2170130			1.8		JAYES RD	East	29/11/2007	20					-				_	0	1	1	1		WILD_RADISH FIRE_RISK
2170130	4	1.8	2.8		JAYES RD	East	29/11/2007	20	1	0	0	0	0	0 0	1	0	0	0	1	1	3		WILD_RADISH TREE_WEEDS FIRE_RISK
2170130	5	2.8	4.1		JAYES RD	East	29/11/2007	20	1	1	0	0	0		-	0	0	0	1	1	3		TREE_WEEDS FIRE_RISK
2170130	6		4.8	0.7	JAYES RD	East	29/11/2007		2	2	2	2	2	2 2	1	1	1	1	0	0	8		BLACKBERRY FIRE_RISK
2170130			5.8		JAYES RD	East	29/11/2007	20				1	1	1	1	1	1	0	1	2	7		BLACKBERRY FIRE_RISK
2170130			_		JAYES RD	East	29/11/2007	20				1	1		1	1		1	1	0			BLACKBERRY FIRE_RISK
2170130	9		6.6		JAYES RD	East	29/11/2007	20		-		0			1	1	0	0	1	1	5		FIRE_RISK
2170130	10		7.1		JAYES RD	East	29/11/2007	20				1	2					1	1	1	9		FIRE_RISK
2170130	11	7.1	7.5		JAYES RD	East	29/11/2007		2									1	0	-	9		FIRE_RISK
2170130	12		8.29		JAYES RD	East	29/11/2007		2		2	1	2	2 1	2	2		2			9		BLACKBERRY FIRE_RISK
2170131	1	0	0.4		PROWSE RD	East	2/10/2007	40				1	1	1	1	1	2	2	2		_		FIRE_RISK
2170131	2		1.5		PROWSE RD	East	2/10/2007	40				2	1	2				2	2	0	10		FIRE_RISK
2170131	3		1.8		PROWSE RD	East	2/10/2007	40				2	1	2				2	1	0	-		FIRE_RISK
2170131	4	1.8	2.06		PROWSE RD	East	2/10/2007	40			2	2 2						2				-	
2170132		0	0.6		GREENBUSHES RD	South	2/10/2007	20		1	2	! 1	2	! 1	2	1	2	1	0	1	10		BRIDAL_CREEPER FIRE_RISK
2170132	2	0.6	1.27	0.67	GREENBUSHES RD	South	2/10/2007	20	1	1	1	1	1	1	1	1	1	1	1	1	6	6	FIRE_RISK

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta			ent of etation	PI	ative ant ecies	w	eeds	В	ue as iol. ridor		oining Iduse	Val	servation ue Score (0-12)	Overlay Data
		(,	()					(m)	Left	Right	Left	Right		Right	Left	Right	Left	Right	Left	Right		Right	(Listed if Present)
2170132	3	1.27	3		GREENBUSHES RD	South	2/10/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0	10		FIRE_RISK
2170132	4	3	3.8		GREENBUSHES RD	South	2/10/2007		2	2	2	2	2 2	2	2	2	2	2	1	0	11		FIRE_RISK
2170132	5	3.8	4.6		GREENBUSHES RD	South	2/10/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0	10		FIRE_RISK
2170132	6	4.6	5.5		GREENBUSHES RD	South	2/10/2007	20	2	0	1	C	2	0	1	0	1	0	1	1	8		FIRE_RISK
2170132	7	5.5	6.1		GREENBUSHES RD	South	2/10/2007	20	0	0	0	C	0 0	0	0	0	0	0	1	1	1		AFRICAN_LOVEGRASS FIRE_RISK
2170132	8	6.1	6.66	0.56	GREENBUSHES RD	South	2/10/2007	20	2	2	: 1	1	2	2	1	1	1	1	1	1	8	8 8	FIRE_RISK
2170132	9	6.66	7.3	0.64	GREENBUSHES RD	South	2/10/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0	10	0 10	FIRE_RISK
2170132	10	7.3	8.23	0.93	GREENBUSHES RD	South	2/10/2007	unknown	1	1	0	C	1	1	2	2	1	1	1	1	6	6 6	FIRE_RISK
2170132	11	8.23	9.4	1.17	GREENBUSHES RD	South	2/10/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0	10	10	FIRE_RISK
2170132	12	9.4	10.2	0.8	GREENBUSHES RD	South	2/10/2007	unknown	0	0	0	C	0 0	0	0	0	0	0	1	1	1		BLACKBERRY FIRE_RISK
2170132	13	10.2	11	0.8	GREENBUSHES RD	South	2/10/2007	unknown	2	0	2	C	2	0	2	2	2	0	0	1	10	3	BLACKBERRY TREE_WEEDS FIRE_RISK
2170133	1	0	0.93	0.93	WESLINGTON RD	South	2/10/2007	20	1	1	0	C	0 0	0	0	0	0	0	1	1	2	2 2	TREE_WEEDS FIRE_RISK
2170134	1	0	0.9	0.9	AMMON RD	North East	2/10/2007	0	2	2	2	2	2 2	2	2	2	2	2	0	0	10	10	FIRE_RISK
2170134	2	0.9	1.3	0.4	AMMON RD	North East	2/10/2007	0	2	2	2 2	2	2 2	2	2	2	2	2	1	0	11	10	FIRE_RISK
2170134	3	1.3	5.3	4	AMMON RD	North East	2/10/2007	unknown	2	2	2 2	2	2 2	2	2	2	0	0	0	0	8	8 8	FIRE_RISK
2170134	4	5.3	5.8	0.5	AMMON RD	North East	2/10/2007	20	1	1	0	C	0 0	0	1	1	0	0	1	1	3		BLACKBERRY FIRE_RISK
2170134	5	5.8	6.44	0.64	AMMON RD	North East	2/10/2007	unknown	2	2	2 2	2	2 2	2	2	2	2	2	0	0	10) 10	FIRE_RISK
2170135	1	0	1.9	1.9	WALTERS TRACK	South East	2/10/2007	unknown	2	2	2	2	2 2	2	2	2	0	0	0	0	8	8 8	
2170135	2	1.9	2.4	0.5	WALTERS TRACK		2/10/2007	unknown	2	2	1	1	1	1	2	2	2	2	0	1	8	8 9	
2170135	3	2.4	2.9	0.5	WALTERS TRACK		2/10/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0	10	10	
2170135	4	2.9	3.16	0.26	WALTERS TRACK	South East	2/10/2007	unknown	1	1	1	1	1	1	1	1	1	1	1	1	6	6 6	BRIDAL_CREEPER BLACKBERRY
2170136	1	0	1	1	AMMONS TRACK	North East	2/10/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0	10	0 10	FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta		-	ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. ridor		oining nduse		nservation lue Score (0-12)	Overlay Data
		Ľ,	, ,					(m)	Left	Right	Left	Right		Right	Left	Right			Left	Right	Left	Right	(Listed if Present)
2170141	1	0	0.3		GRIMWADE RD	North East	2/10/2007		0 0) 1	0	C	0 0	0 0	1	1	1	1	1	1	2		FIRE_RISK
2170141	2	0.3	0.6		GRIMWADE RD	North East	2/10/2007			2	2 0	C	0 0	0 0	0	(0 0	0	1	1	2		FIRE_RISK
2170141	3	0.6	0.8		GRIMWADE RD	North East	2/10/2007	20	0 0	C	0 0	C	0 0	0 0	1	1	1	1	1	1	2		FIRE_RISK
2170141	4		1		GRIMWADE RD	North East	2/10/2007) 2	2 0	1	0) 1	0	1	0	3	1	2	! 1		FIRE_RISK
2170141	5		1.2		GRIMWADE RD	North East	2/10/2007			2		1	0) 1	1	1	1 2	3	1	2	2 4		BRIDAL_CREEPER FIRE_RISK
2170141	6		1.8		GRIMWADE RD	North East	2/10/2007	20	0 0) 2	2 0	1	0) 1	0	1	0	3	1	2	: 1		BRIDAL_CREEPER FIRE_RISK
2170141	7	1.8	2.2		GRIMWADE RD	North East	2/10/2007		1	2	2 0	1	0	1	1	1	1	3	2	2 2	2 4		BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170141	8	2.2	3.5	1.3	GRIMWADE RD	North East	2/10/2007	unknown	1	2	2 0	1	0	1	1	1	1	3	2	2 0	4		BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170141	9	3.5	4.4	0.9	GRIMWADE RD	North East	2/10/2007	20	0 0) C) 0	C	0 0	0 0	0	(0 0	0	2	2 2	2		FIRE_RISK
2170141	10	4.4	5.3		GRIMWADE RD	North East	2/10/2007				2	C			2		2 6	2	0) 1	8		FIRE_RISK
2170141	11	5.3	6.1		GRIMWADE RD	North East	2/10/2007		0 2	2 2	2 2	1	2	2 1	2	2	2 6	4	0) 1	8	8 7	FIRE_RISK
2170141	12		12.15		GRIMWADE RD	North East	2/10/2007	unknown	2	2 2	2 2	2	2 2	2 2			2 6	6	0	0 0	8		FIRE_RISK
2170141	13				GRIMWADE RD	North East	2/10/2007				-						2 2	2		1	3		BLACKBERRY FIRE_RISK
2170141	14		18.42		GRIMWADE RD	North East	2/10/2007		2								2 6	6					TREE_WEEDS FIRE_RISK
2170141	15	18.42	31.5	13.08	GRIMWADE RD	North East	2/10/2007	unknown	2	2 2	2 2	2	2 2	2	2	2	2 2	2	0	0 0	10		BLACKBERRY TREE_WEEDS FIRE_RISK
2170141	16	31.5	31.92		GRIMWADE RD	North East	2/10/2007	20	0 1	1	1	C	0 0	0	1	(2	0	1	0	4		WATSONIA FIRE_RISK
2170142	1	3.75	3.95		SOUTHAMPTON RD	South	2/10/2007	20	0 1	C) 1	1	0	0 0	0	1	1 0	0	1	1	3		WATSONIA WILD_RADISH BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170142	2	3.95	5.75		SOUTHAMPTON RD	South	2/10/2007	20	0 1	1	0	C	0 0	0 0	0	() 1	1	0	0 0	2	2 2	FIRE_RISK
2170142	3	5.75	5.95	0.2	SOUTHAMPTON RD	South	2/10/2007	20	0 1	1	0	C	0 0	0 0	0	() 1	1	1	1	3		FIRE_RISK
2170142	4	5.95	6.35	0.4	SOUTHAMPTON RD	South	2/10/2007	20	0 1	1	0	C	0 0	0 0	2	2	2 1	1	0	0 0	4	4 4	FIRE_RISK

Road#		Start	OD Finish (km)		Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	P	ative lant ecies	W	eeds	В	ue as iol. ridor		oining duse	Val	servation ue Score (0-12)	Overlay Data
		. ,	` '					(m)	Left	Right	Left	Right		Right	Left	Right			Left	Right		Right	(Listed if Present)
2170142	5	6.35	7.35		SOUTHAMPTON RD	South	2/10/2007	20) 1	1	0	0	C	0 0	0	0	0	0	1	1	2		WILD_RADISH TREE_WEEDS FIRE_RISK
2170142	6	7.35	7.75	0.4	SOUTHAMPTON RD	South	2/10/2007	20	0 0	0	0	0	C	0 0	0	0	0	0	2	1	2	2 1	WILD_RADISH TREE_WEEDS FIRE_RISK
2170142	7	7.75	8.55	0.8	SOUTHAMPTON RD	South	2/10/2007	20	0 0	0	0	C	C) 0	0	0	0	0	2	1	2	2 1	AFRICAN_LOVEGRASS WILD_RADISH TREE_WEEDS FIRE_RISK
2170142	8	8.55	8.95	0.4	SOUTHAMPTON RD	South	2/10/2007	20) 1	1	0	0	C	0 0	0	0	0	0	2	1	3	8 2	WILD_RADISH TREE_WEEDS FIRE_RISK
2170142	9	8.95	9.55		SOUTHAMPTON RD	South	2/10/2007	20		1	0	0	C) 0	0	0	0	0	2	2	3		WILD_RADISH FIRE_RISK
2170142	10	9.55	11.15	1.6	SOUTHAMPTON RD	South	2/10/2007	20) 1	1	1	1	C	0 0	0	0	0	0	2	1	4		WILD_RADISH TREE_WEEDS FIRE_RISK
2170142	11	11.15	14.7	3.55	SOUTHAMPTON RD	South	2/10/2007	20) 1	1	1	1	C) 0	0	0	0	0	2	1	4		WILD_RADISH BLACKBERRY TREE_WEEDS FIRE_RISK
2170143	1	0	0.2		OLD PADBURY RD	South East	20/10/2007	20		2	2 0	0	C	0 0	0	0	0	0	2	2	4		WATSONIA WILD_RADISH FIRE_RISK
2170143	2	0.2			OLD PADBURY RD	South East	20/10/2007			1	0	1	C	0 0	0	0	0	0	2	2	3		WILD_RADISH FIRE_RISK
2170143	3	0.65	0.8		OLD PADBURY RD	South East	20/10/2007	20) 1	1	0	0	C	0 0	0	0	0	0	1	0	2		WILD_RADISH TREE_WEEDS FIRE_RISK
2170143	4	0.8	1.2		OLD PADBURY RD	South East	20/10/2007	20) 1	1	0	1	C) 0	0	0	0	0	2	1	3		WILD_RADISH BLACKBERRY TREE_WEEDS FIRE_RISK
2170143	5	1.2	1.9	0.7	OLD PADBURY RD	South East	20/10/2007	20) 1	1	1	1	C	0 0	0	0	0	0	2	1	4	3	WILD_RADISH BLACKBERRY FIRE_RISK
2170143	6	1.9	2.35		OLD PADBURY RD	South East	20/10/2007	20		1	1	1	C) 0	0	0	0	0	0	1	2		WILD_RADISH BLACKBERRY TREE_WEEDS FIRE_RISK
2170144	1	0			HAY RD	East	20/10/2007			1	0	1	C	0 0	0	0	0	0	1	2	2		WILD_RADISH TREE_WEEDS FIRE_RISK
2170144	2	1.5	2.4	0.9	HAY RD	East	20/10/2007	20) 1	1	1	1	C	0 0	0	0	0	0	1	2	3	3 4	WILD_RADISH TREE_WEEDS FIRE_RISK

Road#	Sect#	Start	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta			ent of etation	Pla	ative ant cies	W	eeds	В	ue as iol. rridor		oining Iduse	Val	servation ue Score (0-12)	Overlay Data
		(,	()					(m)	Left	Right	Left	Right			Left	Right			Left	Right		Right	(Listed if Present)
2170144	3	2.4	3	0.6	HAY RD	East	20/10/2007	20) ^	1	1	C		0	0	0	0	0	1	2	3		WILD_RADISH FIRE_RISK
2170144	4	3	3.4		HAY RD	East	20/10/2007	20		1	0	C	0 0	0	0	0	0	0	2	2	3		WILD_RADISH FIRE_RISK
2170144	5	3.4			HAY RD	East	20/10/2007	20		1	1	1	0	0	0	1	0	0	2	0	4		FIRE_RISK
2170144	6	3.8	4	0.2	HAY RD	East	20/10/2007	20	0 (0 0	0	C	0 0	0	0	0	0	0	2	2	2		WILD_RADISH FIRE_RISK
2170144	7	4	4.15	0.15	HAY RD	East	20/10/2007	20) ^	1	0	C	0 0	0	0	0	0	0	2	2	3		WILD_RADISH BRIDAL_CREEPER FIRE_RISK
2170144	8	4.15	4.4	0.25	HAY RD	East	20/10/2007	20) ^	2	0	1	0	1	0	2	0	0	2	0	3		WILD_RADISH FIRE_RISK
2170144	9	4.4	5.1		HAY RD	East	20/10/2007	20) ^	1	0	C	0 0	0	0	0	0	0	2	2	3		WILD_RADISH FIRE_RISK
2170144	10	5.1	5.6		HAY RD	East	20/10/2007	20		0 0	0	C	0 0	0	0	0	0	0	2	2	2		WILD_RADISH FIRE_RISK
2170144	11	5.6	5.8		HAY RD	East	20/10/2007	20) ^	1	0	C	0 0	0	0	0	0	0	2	2	3		WILD_RADISH FIRE_RISK
2170145	1	0	1	1	GLENARDEN RD	West	20/10/2007	20) 2	2 2	1	1	2	2	2	2	2	2	0	0	9	9	FIRE_RISK
2170145	2	1	2	1	GLENARDEN RD	West	20/10/2007	20) ^	1	2	1	0	0	1	1	2	2	2	2	8		WILD_RADISH FIRE_RISK
2170145	3	2	3	1	GLENARDEN RD	West	20/10/2007	20) 1	0	C	0 0	0	0	0	0	0	2	2	2		WILD_RADISH BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170145	4	3	4.98	1.98	GLENARDEN RD	West	20/10/2007	20) 1	0	C	0 0	0	0	0	1	2	2	1	3		TREE_WEEDS FIRE_RISK
2170146	1	0	0.6	0.6	SPRING GULLY RD	East	14/10/2007	20) ^	1	0	C	0 0	0	0	0	0	0	2	2	3		WILD_RADISH FIRE_RISK
2170146	2	0.6	0.9		SPRING GULLY RD	East	14/10/2007			0 0	0	C	0 0	0	0	0	0	0	2	2	2		WILD_RADISH FIRE_RISK
2170146	3	0.9	1.1		SPRING GULLY RD	East	14/10/2007	20		0 0	0	C	0 0	0	0	0	0	0	2	2	2		AFRICAN_LOVEGRASS WILD_RADISH FIRE_RISK
2170146	4	1.1	1.43	0.33	SPRING GULLY RD	East	14/10/2007		-	2 2	2	2	2 1	1	2	2	2	2	0	0	9	9	FIRE_RISK
2170148	1	0	1.8	1.8	BATHGATE RD	West	16/10/2007	20		1	1	1	0	0	1	1	0	0	0	0	3	3 3	FIRE_RISK
2170148	2	1.8	2.23	0.43	BATHGATE RD	West	16/10/2007	20) 2	2 2	0	C) 0	0	0	0	0	0	0	0	2		WATSONIA WILD_RADISH BLACKBERRY FIRE_RISK
2170149	1	0	1.01	_	MAILMAN RD	South	16/10/2007	() ^	1	1	1	1	1	1	1	1	0	1	1	6		WATSONIA BLACKBERRY FIRE_RISK
2170149	2	1.01	1.21	0.2	MAILMAN RD	South	16/10/2007	() ^	0	1	1	1	1	1	2	1	2	1	0	6	6 6	FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. ridor		oining Iduse		nservation lue Score (0-12)	Overlay Data
		` '	` '					(m)	Left	Right	Left	Right		Right	Left	Right			Left	Right	t Left	Right	(Listed if Present)
2170149	3	1.21	1.61	0.4	MAILMAN RD	South	16/10/2007	() 1	1	1	0	1	0	1	1	1	0	1	2	2	6 4	FIRE_RISK
2170149	4	1.61	1.91	0.3	MAILMAN RD	South	16/10/2007	20) 1	2	2 1	1	2	1	2	1	1	0	1		1 8		FIRE_RISK
2170149	5	1.91	2.21	0.3	MAILMAN RD	South	16/10/2007	20) 1	0) 1	2	2 2	0	2	C) 1	0	1		1 8	8 3	FIRE_RISK
2170149	6	2.21	2.81	0.6	MAILMAN RD	South	16/10/2007	20	0 0	0	0 0	2	2 0	0	0	C	0 0	0	1		1 1	1 3	FIRE_RISK
2170149	7	2.81	3.01	0.2	MAILMAN RD	South	16/10/2007	20) 1	1	0	1	0	0	0	1	0	1	1		1 2	2 5	FIRE_RISK
2170149	8	3.01	3.41	0.4	MAILMAN RD	South	16/10/2007	unknown	1	1	0	1	0	0	0	2	2 0	2	0		1 1	1 7	FIRE_RISK
2170149	9	3.41	3.91	0.5	MAILMAN RD	South	16/10/2007	unknown	2	1	2	! 1	2	1	2	2	2 1	2	0		1 9	9 8	FIRE_RISK
2170149	10	3.91	7.51	3.6	MAILMAN RD	South	16/10/2007	unknown	2	2	2 2	2 2	2 2	2	2	1	1	2	0	() (9 9	FIRE_RISK
2170149	11	7.51	8.21	0.7	MAILMAN RD	South	16/10/2007	unknown	2	0) 2	2 0	2	0	2	C) 2	0	0		1 10		FIRE_RISK
2170150	1	0	0.3		MARDAWARRA RD	East	11/11/2007	20) 2	2	2 0	0	0 0	0	1	1	0	0	2	2	2 !	5 5	FIRE_RISK
2170150	2	0.3	0.6		MARDAWARRA RD	East	11/11/2007	20		0	0 0	0	0 0	0	0	C	0 0	0	2	2	2 2		FIRE_RISK
2170150	3	0.6	0.8		MARDAWARRA RD	East	11/11/2007	20		2	2 1	1	1	1	1	1	1	2	2	() 8		FIRE_RISK
2170150		0.8			MARDAWARRA RD	East	11/11/2007	20						0	1	C		0			2 7		FIRE_RISK
2170150	5	1.64	2.59		MARDAWARRA RD	East	11/11/2007	20	-		0		-			C			_		2 4		FIRE_RISK
2170150	6	2.59	3.19		MARDAWARRA RD	East	11/11/2007	20				-			0	C							AFRICAN_LOVEGRASS WILD_RADISH FIRE_RISK
2170152	1	0	0.64		MITCHELL ST	East	11/11/2007	20		0			0 0	0	1	1	0	0	2				FIRE_RISK
2170153	1	0	0.45	0.45	HAWTER RD	West	11/11/2007	20) 1	1	0	0	0	0	0	C	0	0	2		2 3		WATSONIA TREE_WEEDS FIRE_RISK
2170153	2	0.45	2	1.55	HAWTER RD	South	11/11/2007	20) 1	1	0	0 0	0 0	0	0	C	0	0	1		2 2	2 3	WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170153	3	2	2.45	0.45	HAWTER RD	South	11/11/2007	20	0 0	0	0 0	0	0 0	0	2	2	2 0	0	1		1 3	3 3	·
2170154	1	0	0.9		CUNDINUP-KIRUP RD		1/10/2007	20		0	0 0	0 0	0 0	0	0	C) 0	0	2		2		AFRICAN_LOVEGRASS WILD_RADISH WATSONIA TREE_WEEDS FIRE_RISK
2170154	2	0.9	1		CUNDINUP-KIRUP RD		1/10/2007	20) 2	0	2	2 0	2	0	2	C	2	0	0	2	2 10		WATSONIA AFRICAN_LOVEGRASS FIRE_RISK
2170154	3	1	12.8		CUNDINUP-KIRUP RD		1/10/2007	20	-		2 2	1	2	2	2				2		2 10		TREE_WEEDS FIRE_RISK
2170154	4	12.8	14.1	1.3	CUNDINUP-KIRUP RD	South	1/10/2007	20) 2	1	2	1	2	0	2	1	2	0	0	2	2 10	0 5	WATSONIA FIRE_RISK

Road#	Sect#		OD Finish (km)		Road Name	Direction	Date	Width	Native Vegeta	tion		ent of tation	PI	ative ant cies	W	eeds	В	ue as iol. rridor		oining Iduse	Val	nservation lue Score (0-12)	Overlay Data
		. ,	` '					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170154	5	14.1	15.46	1.36	CUNDINUP-KIRUP RD	South	1/10/2007	20	2	2	2	2	2 2	2	2	2	2	2	0	C	10) 10	WATSONIA
2170158	1	0	1.12	1.12	RUSSELL RD	East	11/11/2007	unknown	1	2	1	2	2 1	2	1	2	1	2	1	C	6	6 10	FIRE_RISK
2170159	1	0	1.7	1.7	MAIDMENT RD	South	11/11/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	C	10) 10	FIRE_RISK
2170159	2	1.7	3	1.3	MAIDMENT RD	South	11/11/2007	20	2	0	1	0) 1	0	2	2	2	0	1	1	g) 3	FIRE_RISK
2170159	3	3	3.4		MAIDMENT RD	South	11/11/2007	20	0	0	0	0	0 0	0	0	2	0	0	1	1	1		TREE_WEEDS FIRE_RISK
2170159	4	3.4	5.08		MAIDMENT RD	South	11/11/2007	20	0	1	0	0	0 0	0	0	1	0	1	1	1	1		TREE_WEEDS FIRE_RISK
2170162	1	0	5.17	5.17	EWARTS RD	West	11/11/2007	20	0	0	0	0	0 0	0	0	0	0	0	1	1	1		WILD_RADISH BLACKBERRY TREE_WEEDS
2170162	2	5.17	5.67	0.5	EWARTS RD	West	11/11/2007	unknown	2	2	1	1	1	1	1	1	1	1	2	2	2 8	3 8	FIRE_RISK
2170163	1	0	0.53	0.53	CEMETERY RD	East	11/11/2007	unknown	2	2	2	2	2 2	2	2	2	1	1	0	C) 9	9 9	FIRE_RISK
2170164	1	0	0.1	0.1	WALTER ST	North	11/11/2007	20	2	2	1	1	1	1	0	0	1	1	0	0) 5	5 5	FIRE_RISK
2170164	2	0.1	0.4	0.3	WALTER ST	North	11/11/2007	20	0	0	0	0	0 0	0	0	0	0	0	0	2	2 0	2	TREE_WEEDS FIRE_RISK
2170164	3	0.4	1	0.6	WALTER ST	North	11/11/2007	20	1	0	1	0) 1	0	0	0	0	0	1	C) 4		WATSONIA AFRICAN_LOVEGRASS WILD_RADISH BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170164	4	1	1.29		WALTER ST	North	11/11/2007	20	1	1	1	0) 1	0	0	0	0	0	1	1	4		WATSONIA WILDRADISH BRIDAL_CREEPER TREE_WEEDS FIRE_RISK
2170166	1	0	1.46	1.46	LUKIS RD	East	13/11/2007	unknown	1	2	0	1	0	1	2	2	0	0	0	C) 3		AFRICAN_LOVEGRASS FIRE_RISK
2170168	1	0	0.26	0.26	BROOK RD	West	11/11/2007	unknown	1	2	0	1	0	1	0	1	0	2	1	1	2		WATSONIA BLACKBERRY TREE_WEEDS FIRE_RISK
2170174	1	0	0.59	0.59	STEERE RD	North	11/11/2007	20	0 0	0	0	0	0 0	0	1	1	0	0	0	0) 1	1	FIRE_RISK
2170181	1	0	0.3	0.3	MEAGHER RD	South	11/11/2007	unknown	2	2	2	2	2 2	2	2	2	2	2	0	0	10		FIRE_RISK
2170181	2		1.41		MEAGHER RD	South	11/11/2007		2						2				1	C			TREE_WEEDS FIRE_RISK
2170183	1	0			JONES RD	South	11/11/2007		2					0						1			FIRE_RISK
2170183	2	0.7	2.7	2	JONES RD	South	11/11/2007		_			2	2 2	2	2	2	2	2	0	0) 10		FIRE_RISK
2170184	1	0	1.3	1.3	DELAPORTE RD	South	13/11/2007		2	2	2	2	2 2	2	2	2	1	1	0	C) 9	9 9	FIRE_RISK
2170184	2	1.3	1.61		DELAPORTE RD	South	13/11/2007		2	1	2	1	2	2	2	2	1	0	0	1	9		FIRE_RISK
2170186	1	0	0.5	0.5	CIRRILLO RD	West	11/11/2007	20	2	2	1	1	1	1	1	2	1	2	1	1	7	7 9	WATSONIA FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	# Na Pla Spe	ant	W	eeds	В	ue as Biol. rridor		oining Iduse	Valu	servation ue Score (0-12)	Overlay Data
		. ,	、 <i>'</i>					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170186	2	0.5	0.9	0.4	CIRRILLO RD	West	11/11/2007	unknown	2	2	2	: 1	2	1	2	2	2 2	2	0	1	10	9	WATSONIA BLACKBERRY FIRE_RISK
2170186	3	0.9	1.24	0.34	CIRRILLO RD	West	11/11/2007	unknown	2	2	2	2	2 2	2	2	1	2	2	0	0	10	9	WATSONIA BLACKBERRY FIRE RISK
2170190	1	0	0.21	0.21	BOULDER ST	South	11/11/2007	20	0	0	0	0 (0 (0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170192	1	0	1.35	1.35	PALMER ST	East	11/11/2007	20	0	0	0	0	0 0	0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170193	1	0	0.6		MILO RD	South	11/11/2007	20	2	2	1	1	2	2	1	1	1	1	1	1	8		WATSONIA BRIDAL_CREEPER TREE_WEEDS
2170193	2	0.6	2	1.4	MILO RD	South	11/11/2007	20	2	2	1	1	2	2	2	2	2 1	1	0	1	8	9	TREE_WEEDS
2170193	3	2	2.73	0.73	MILO RD	South	11/11/2007	20	1	1	1	1	1	1	0	1	I 0	0	1	1	4	5	
2170195	1	0	0.45	0.45	SMITH ST	South	11/11/2007	20	0	0	0	0 0	0 (0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170196	1	0	0.5	0.5	BOND ST	East	11/11/2007	20	0	0	0	0	0 0	0	1	1	0	0	0	0	1	1	FIRE_RISK
2170197	1	0	0.26	0.26	VICTORIA PDE	North	11/11/2007	20	0	0	0	0	0 0	0	1	1	0	0	0	0	1	1	FIRE_RISK
2170198	1	0	0.23	0.23	PADMAN ST	South	11/11/2007	20	0	0	0	0	0 0	0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170199	1	0	0.3	0.3	LITTLE RD	South	11/11/2007	20	1	1	1	1	1	1	1	1	I 0	0	1	1	5	5	WATSONIA FIRE_RISK
2170199	2	0.3	0.5	0.2	LITTLE RD	South	11/11/2007	20	1	0	0	0) 1	0	0	C) 1	0	1	1	4	1	WATSONIA FIRE_RISK
2170199	3	0.5	1	0.5	LITTLE RD	South	11/11/2007	20	2	1	1	1	1	1	1	1	1 2	2	1	1	8	7	WATSONIA FIRE_RISK
2170199	4	1	1.2	0.2	LITTLE RD	South	11/11/2007	20	2	2	2	2 2	2 2	2	2	2	2 2	2	1	1	11	11	FIRE_RISK
2170199	5	1.2	2.38	1.18	LITTLE RD	South	11/11/2007	20	2	2	1	1	1	1	1	1	1 2	2	1	1	8	8	WATSONIA FIRE_RISK
2170200	1	0	0.6	0.6	MIOLOTTI RD	East	3/10/2007	20	0	Ū) () 1	1	1	1	1	0	1	0	4		WATSONIA AFRICAN_LOVEGRASS TREE_WEEDS FIRE_RISK
2170200	2	0.6	0.92	0.32	MIOLOTTI RD	East	3/10/2007	20	2	2	1	1	1	1	1	1	1 2	2	0	0	7	7	FIRE_RISK
2170200	3	0.92	1.94	1.02	MIOLOTTI RD	East	3/10/2007	20	2	2	1	1	1	1	1	1	1	1	1	1	7	7	WATSONIA AFRICAN_LOVEGRASS TREE_WEEDS FIRE_RISK
2170204	1	0	0.21	0.21	TORRISI PL	East	3/10/2007	20	0	0	0	0 0	0 (0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170208	1	0	0.73	0.73	MEAD ST	East	3/10/2007	20	0	0	0	0 0	0 0	0	1	1	I 0	0	0	0	1	1	FIRE_RISK
2170209	1	0	0.5		MILLER RD	North East	3/10/2007	20				0) 1	1	2					1	8		FIRE_RISK
2170209	2	0.5			MILLER RD	North East	3/10/2007	20			1	1	1	1	2		2 2			1	9		FIRE_RISK
2170210	1	0	0.53		EDWARD RD	East	1/10/2007	20			1	0		0		C					2		BRIDAL_CREEPER
2170211	1	0	0.00		HARDY PL	West		unknown	2			1	1	1	1	1	1	1					TREE_WEEDS FIRE_RISK
2170215	1	0	0.34	0.34	GOLF CLUB RD	South	1/10/2007	20	0	0	0	0	0 0	0	1	1	0	0	0	0	1	1	FIRE_RISK

Road#	Sect#		OD Finish (km)		Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	PI	ative ant ecies	W	eeds	В	ue as iol. ridor		oining Iduse	Val	nservation lue Score (0-12)	Overlay Data
		` '	· /					(m)	Left	Right	Left	Right			Left	Right			Left	Right			(Listed if Present)
2170218	1	0	1	1	MUNGALUP RD (F)	North	1/10/2007	20	2	2	2	2	2 2	2	2	2	2	2	2	2	10) 10	FIRE_RISK
2170218	2	1	2.4	1.4	MUNGALUP RD (F)	North	1/10/2007	20	0 0	0	0	C	0 0	0	2	2	0	0	2	2	3	3 3	BLACKBERRY
2170218	3	2.4	2.7	0.3	MUNGALUP RD (F)	North	1/10/2007	20	0 0	2	0	2	2 0	2	2	2	0	2	1	0	3	3 10	TREE_WEEDS FIRE_RISK
2170218	4	2.7	3.73		MUNGALUP RD (F)	North	1/10/2007	20		2	2	2	2 2	2	2	2	2	2	2	2	10		TREE_WEEDS FIRE_RISK
2170219	1	0	8.78		BEST RD (F)	South	1/10/2007	20		2	2	2	2 2	2	2	2	2	2	0	0	10		TREE_WEEDS FIRE_RISK
2170220	1	0	2.1		GAVINS RD	North West		UNKNOW N		2	2	2	2 2	2	2	2	2	2	0	0	10	0 10	WATSONIA TREE_WEEDS
2170220	2		2.8		GAVINS RD	North West		UNKNOW N		2	2	2	2 2	2	2	2	2	2	0	2			
2170220	3	2.8	3.5		GAVINS RD	North West		UNKNOW N		2	2	2	2 2	2	2	2	2	2	0	0	10	0 10	
2170220	4	3.5			GAVINS RD	North West		UNKNOW N	2			C	2	0	2	2	2	2	0	2	10	8	
2170220	5		6.25		GAVINS RD	North West	2/10/2007		2	2					2			2			10		
2170220	6		11.4		GAVINS RD	North West		UNKNOW N				2	2 2										
2170221	1	0	0.2		KNIGHTS RD	North West	2/10/2007		2	2	1	1	1	2	1	2	2	2	1	0			AFRICAN_LOVEGRASS TREE_WEEDS
2170221	2	0.2	0.4		KNIGHTS RD	North West	2/10/2007		2			2	2 2	2	2	2		2	2	0			WATSONIA
2170221	3		1.9		KNIGHTS RD	North West	2/10/2007	unknown	2			2	2 2	2	2	2	2	2	1	0	11		
2170221	4	1.9			KNIGHTS RD	North West	2/10/2007		2	2	2	2	2 2	2	2	2	2	2	0	1	10		
2170221	5		2.3		KNIGHTS RD	North West	2/10/2007		2			2			2	2	2	2	0	0			
2170221	6		3.06		KNIGHTS RD	North West	2/10/2007		2			2	2 2	2		2		2		0			
2170222	1	0			HICKMAN PL	North East	2/10/2007		2			1	1	1	2			2		1	g		FIRE_RISK
2170228	1	0			LEE RD	South	2/10/2007		2	2	2	2	2 2	2	2	2	2	2	2	0	12		
2170229	1	0	0.35		MCGUTCHEON RD	East	2/10/2007	20		0	1	C) 1	0	1	0	0	0	1	1	6		AFRICAN_LOVEGRASS FIRE_RISK
2170232	1	0	0.46		RAINBOW DOWNS	North	2/10/2007	20) 1	1	1	1	0	0	1	1	1	0	1	1	5		FIRE_RISK
2170233	1	0			MARWICK RD	South	2/10/2007			0	0	C			0			0			1		AFRICAN_LOVEGRASS BLACKBERRY FIRE_RISK
2170236	1	0	0.22	0.22	OLDMEADOW RD	North	1/10/2007	20	0 1	1	0	C	0 0	0	0	0	0	0	2	2	3	3 3	AFRICAN_LOVEGRASS TREE_WEEDS

Road#	Sect#	OD Start (km)	OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	Pla	ative ant ecies	We	eds	В	ue as iol. ridor		oining nduse	Val	servation ue Score (0-12)	Overlay Data
		Ì Í	. ,					(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170236	2	0.22	0.95	0.73	OLDMEADOW RD	North	1/10/2007	20	2	2	2	2 2	2 2	2	2	2	1	1	2	2 2	9	11	FIRE_RISK
2170237	1	0	0.3		CHARLTON RD	South	1/10/2007	20	1	2	1	1	0	1	1	1	0	1	2	2 0	5		AFRICAN_LOVEGRASS FIRE_RISK
2170237	2	0.3	0.6	0.3	CHARLTON RD	South	1/10/2007	0	2	2	. 1	1	1	1	1	1	0	0	2	2 1	7	6	FIRE_RISK
2170237	3	0.6	1.16	0.56	CHARLTON RD	South	1/10/2007	0	0	0	C) (0 (0	0	0	0	0	2	2 2	2	2 2	FIRE_RISK
2170239	1	0	0.29		RUSSEL RD	North	1/10/2007	20	0	0	C) (0 0	0	0	0	0	0	0	0 0	0		TREE_WEEDS FIRE_RISK
2170240	1	0	0.45	0.45	JOHNSTON ST	South	1/10/2007	20	1	0	C) (0 (0	1	1	0	0	0	0 (2	2 1	FIRE_RISK
2170241	1	0	0.34	0.34	FOWLER RD	East	1/10/2007	20	0	0	C) (0 (0	1	1	0	0	0	0 0	1	1	FIRE_RISK
2170242	1	0	0.2	0.2	LANGRIDGE RD	East	1/10/2007	20	1	0	1	() 1	0	2	0	0	0	0) 1	5	6 1	FIRE_RISK
2170242	2	0.2	0.9	0.7	LANGRIDGE RD	East	1/10/2007	unknown	1	2	1	2	2 1	2	2	2	2	2	2	2 0	9	10	FIRE_RISK
2170247	1	0	0.78	0.78	THOMSON ST	South	1/10/2007	20	0	0	C) (0 (0	1	1	0	0	0	0 (1	1	FIRE_RISK
2170251	1	0	0.2	0.2	TRAMLINE RD	North	1/10/2007	20	2	2	1	1	2	2	2	2	2	2	1	1	10	10	FIRE_RISK
2170251	2	0.2	0.67	0.47	TRAMLINE RD	North	1/10/2007	20	0	2	C) 2	2 0	2	0	1	0	0	1	0	1	7	FIRE_RISK
2170252	1	0	3.06	3.06	VALENTINE RD	North	6/10/2007	0	2	2	2	2 2	2 2	2	2	2	2	2	0	0 (10	10	FIRE_RISK
2170253	1	0	0.3	0.3	KIRKPATRICK RD	West	6/10/2007	unknown	2	2	2	2 2	2 2	2	2	2	2	2	0	0 (10	10	FIRE_RISK
2170253	2	0.3	1.14	0.84	KIRKPATRICK RD	West	6/10/2007	20	0	0	C) () 0	0	0	0	0	0	2	2 2	2	2 2	FIRE_RISK
2170255	1	0	0.9	0.9	WARNER ST	East	6/10/2007	20	0	0	C) () 0	0	0	0	0	0	2	2 2	2		WATSONIA TREE_WEEDS FIRE_RISK
2170255	2	0.9	1.31	0.41	WARNER ST	East	6/10/2007	20	1	1	C) (0 (0	1	1	0	0	2	2 2	4		FIRE_RISK
2170256	1	0	0.92	0.92	BAILEY HEIGHTS	East	11/11/2007	20	0	0	C) (0 (0	0	0	0	0	0	0 (0	0 0	
2170263	1	0	0.3	0.3	BILLINGHURST RD	West	2/10/2007	20	0	0	C) (0 0	0	0	0	0	0	0	0 0	0		WILD_RADISH FIRE_RISK
2170263	2		0.7		BILLINGHURST RD	West	2/10/2007	20		_						2		_	Ŭ		_		WILD_RADISH FIRE_RISK
2170263	3	0.7	1.03		BILLINGHURST RD	West	2/10/2007	20		-	_) (0 0	0	0	0	0	0	0	0 0	0		
2170264	1	0	0.42	0.42	BRAZIER RD	West	2/10/2007	20		2	1	1	1	1	1	1	1	0	2	2 2	8		WATSONIA AFRICAN_LOVEGRASS WILD_RADISH FIRE_RISK
2170265	1	0	1.09		HAMILTON ST	East	2/10/2007	20		2				1	1	1	2	2			9		WATSONIA AFRICAN_LOVEGRASS WILD_RADISH TREE_WEEDS FIRE_RISK
2170269	1	0	0.84		TALLOWWOOD DRIVE	South	2/10/2007	20		0	C) (0 0	0	1	1	0	0	0	0 0	1	1	FIRE_RISK
2170271	1	0	0.6	0.6	RAILWAY RESERVE RD	North	2/10/2007	20	0	1	C) (0 0	0	0	0	0	0	1	0	1	1	WATSONIA AFRICAN_LOVEGRASS FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta			ent of etation	Pla	ative ant cies	We	eeds	Bi	e as ol. ridor		oining duse	Val	servation ue Score (0-12)	Overlay Data
		```	Č,					(m)	Left	Right I	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
2170274	1	0	3.08	3.08	HUNDLEY RD	South	2/10/2007	unknown	2	2	2	2	2	2	2	2	2	2	0	0	10	10	FIRE_RISK
2170289	1	0	0.4	_	CASTLE ST	North	13/11/2007	20	0 0	0	0	0	0	0	0	0	0	0	2	0	2		AFRICAN_LOVEGRASS FIRE_RISK
2170289	2	0.4	1		CASTLE ST	North	13/11/2007	C	) 2	0	1	0		0	2	0	2	0	0	0	8		WATSONIA TREE_WEEDS FIRE_RISK
2170289	3	1	1.3		CASTLE ST	North	13/11/2007	C	) 2	2	1	2	1	2	2	2	2	2	0	0	8		WATSONIA TREE_WEEDS FIRE_RISK
2170289	4	1.3	1.47		CASTLE ST	North	13/11/2007	C	) 2	0	1	0	1	0	2	2	2	0	0	0	8		WATSONIA FIRE_RISK
2170289	5	1.47	1.57		CASTLE ST	North	13/11/2007	C	) 1	0	0	0	0	0	0	0	0	0	0	0	1		WATSONIA FIRE_RISK
2170292	1	0	0.61		MENARD ACCESS	North	13/11/2007	unknown	2	2	2	2	2	2	2	2	0	0	0	2	8	10	WATSONIA FIRE_RISK
2170294	1	0	0.44		VALLELONGA RD	East	13/11/2007	unknown	2	2	2	1	2	2	2	2	0	0	0	1	8	-	
2170295	1	0	0.61		PAPALIAS RD	East	13/11/2007	_		0	0	0	0	0	0	0	0	0	2	2	2		TREE_WEEDS FIRE_RISK
2170296	1	0	-		STEERE ST EAST	South	13/11/2007			-	0	0	_	-	-	1	0	0	-	0	-		FIRE_RISK
2170301	1	0	0.87	0.87	EDEN VALLEY ACCESS RD	South	13/11/2007	unknown	2	2	2	2	2	2	2	2	2	2	0	0	10		
2170304	1	0	0.01		ROSEDEAN LAND	North	13/11/2007		_	Ĵ	0		-	Ŭ	Ĵ	0	-	0	_	2	2		AFRICAN_LOVEGRASS FIRE_RISK
2170312	1	0	1.52		MERRIFIELD VIEW	North	13/11/2007	20	0 0	0	0	0	0	0	0	0	0	0	1	1	1		FIRE_RISK
2170313	1	0	0.37		WATTLE COURT	North	13/11/2007	-	-	0	0	-	_	0	1	1	0	0	0	0	1		FIRE_RISK
2170315	1	0	1.75		NIOKA DR	North	13/11/2007			-	0	0	-	•	, v	0	-	0	1	1	1	1	FIRE_RISK
2170319	1	0	2.5		HOWLETT RAMBLE	North East	2/10/2007			0	0	0	0	0	0	0	0	0	1	1	1	1	
2170320	1	0	0.00		KATRINA HEIGHTS	West	2/10/2007	20		Ŭ	0		Ū		Ĵ	0	-	0	-	1	1		FIRE_RISK
2170321	1	0	0.15		BALINGA DR	West	11/11/2007	20		-	0	0	-	Ŭ	v	0	-	0	_	2	2		
2170321	2	0.15	0.3	0.15	BALINGA DR	West	11/11/2007	C	) 2	2	2	2	2	2	2	2	2	2	0	0	10		FIRE_RISK
2170321	3	0.3	0.85		BALINGA DR	West	11/11/2007	-	0 0	0	0	0	0	0	0	0	0	0	1	1	1		AFRICAN_LOVEGRASS FIRE_RISK
2170324	1	0	0.3		DOWRICK RD	North	11/11/2007			0	0	0	_	0	0	0	-	0	2	2	2		FIRE_RISK
2170326	1	0	1		TURNER ACCESS RD	East	11/11/2007			0	0	0	0	0	0	0	0	0	1	1	1	1	TREE_WEEDS FIRE_RISK
2170327	1	0	0.3	0.3	MAUGER RD	West	11/11/2007	20	0 0	0	0	0	0	0	1	1	0	0	0	0	1	1	
2170330	1	0	0.6		FROST RD	South	22/09/2007	20	2	0	2	0	2	0	2	0	2	0	0	1	10		AFRICAN_LOVEGRASS BRIDAL_CREEPER FIRE_RISK
2170330	2	0.6	0.83	0.23	FROST RD	South	22/09/2007	C	2	1	2	1	2	1	2	1	2	2	0	1	10	7	AFRICAN_LOVEGRASS BRIDAL_CREEPER FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date		Native Vegeta	tion		ent of etation	Р	lative lant ecies	N	/eeds	E	lue as Biol. rridor		oining nduse	Valu	servation le Score 0-12)	Overlay Data
		()	()					(m)	Left	Right	Left	Right			t Lef	t Right			Left	Right			(Listed if Present)
2170331	1	0	0.3	0.3	MONTGOMERY RD	West	22/09/2007	0	2	1	2	: C	) 2	2	0 2	2 (	) 2	: 1	0	) 2	10	4	WATSONIA FIRE_RISK
2170340	1	0	0.7	0.7	MYRTLE RIDGE	West	2/10/2007	20	0	0	0 0	0 0	) (	)	0 0	) (	0 0	0 0	1	1	1	1	
2170341	1	0	1.1		HETHERINGTON RD	East	2/10/2007	20		0	0	(	) (	)	0 0	) (	0 0	0 0	1	1	1		AFRICAN_LOVEGRASS
2170341	2	1.1	1.4		HETHERINGTON RD	East	2/10/2007	20	0	0	0	0	) (	)	0 0	) (	0 0	0 0	1	1	1	1	AFRICAN_LOVEGRASS
2170341	3				HETHERINGTON RD	East	2/10/2007	20	0	0	0	0	) (	0	0 0	) (	0 0	0 0	2	2 2	2		AFRICAN_LOVEGRASS
H009	1	9			SOUTH WEST HIGHWAY	South		Unknown	2	2	2	2	2 2	2 :	2 1		2 2	2 2	1	1	10		FIRE_RISK
H009	2	5	178.8		SOUTH WEST HIGHWAY	South	2/10/2007		2		2	2 0	0 2	2	0 1	(	0 1	2	1	0	9		LOVE_GRASS FIRE_RISK
H009	3		182.7		SOUTH WEST HIGHWAY	South		Unknown	0	2	2 0	1	1 (		0 0	) .	1 0	0	2	2 2	2		WATSONIA FIRE_RISK
H009	4	182.7	183.6		SOUTH WEST HIGHWAY	South		Unknown	0	0	0	0	) (		0 0	) (	0 0	0	2	2 2	2		FIRE_RISK
H009	5	183.6	184.5	0.9	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	0	0	0	0 0	) (	)	0 0	) (	0 0	0	2	2 1	2	1	WATSONIA LOVE_GRASS FIRE_RISK
H009	6	184.5	186.7		SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	0	0	0	0	) (	)	0 0	) (	0 0	0 0	1	1	1	1	FIRE_RISK
H009	7	186.7	187.3	0.6	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	2	! 1	1	1	1	1 1	·	1 0	0 0	0	) 1	5	6	WATSONIA FIRE_RISK
H009	8	187.3	188.12		SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	0	2	! 1	1	1	1	1 (	) (	0 0	0 0	1	1	3	5	FIRE_RISK
H009	9	2	188.7		SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	2	! 1	2	2 2	2	2 1		1 2	2	0	0 0	8		FIRE_RISK
H009	10		189.1		SOUTH WEST HIGHWAY	South	2/10/2007	40	2	1	1	0	) 2	2	1 1	l	1 1	0	0	) 2	2 7		FIRE_RISK
H009	11		190.7		SOUTH WEST HIGHWAY	South	2/10/2007		0	1	1	0	) (	D	1 (	) .	1 0	0	2	2 2	3		FIRE_RISK
H009	12		192.5		SOUTH WEST HIGHWAY	South		Unknown	0			2			2 1		2 0	2	1	0	2		FIRE_RISK
H009	13		193		SOUTH WEST HIGHWAY	South		Unknown	0		-				0 1		2 0	0 0	1	1	2		FIRE_RISK
H009	14				SOUTH WEST HIGHWAY	South	2/10/2007		2						2 1		2 1	2	1	0	-		FIRE_RISK
H009	15				SOUTH WEST HIGHWAY	South	2/10/2007			1		1	· ·	1	1 1		1 1		2				WATSONIA FIRE_RISK
H009	16				SOUTH WEST HIGHWAY	South	2/10/2007					2			2 1		1 2	2		0			WATSONIA FIRE_RISK
H009	17		196.4		SOUTH WEST HIGHWAY	South	2/10/2007					2	2 2	2	2 1		1 1	1	0	0 0	8		WATSONIA FIRE_RISK
H009	18	196.4	197.58	1.18	SOUTH WEST HIGHWAY	South	2/10/2007	40	2	2	1	1	2	2 :	2 1		1 1	1	2	2 2	9	9	WATSONIA FIRE_RISK

Road#			OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	P	ative lant ecies	W	eeds	В	ue as iol. rridor		oining duse	Valu	servation ue Score (0-12)	Overlay Data
		(,	(,					(m)	Left	Right	Left	Right			Left	Right			Left	Right			(Listed if Present)
H009	19	197.5 8	198.68	1.1	SOUTH WEST HIGHWAY	South	2/10/2007	40	0	0	C	) 0	C	0 0	0	0	0	0	2	2	2	2	WATSONIA FIRE_RISK
H009	20	198.6 8	199.68		SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	1	1	1	1	C	) (	1	1	1	1	2	2	6		WATSONIA FIRE_RISK
H009	21	199.6 8	200.18	0.5	SOUTH WEST HIGHWAY	South	2/10/2007	40	0	0	0 0	0 0	C	0 0	0	0	0	0	2	2	2	2	WATSONIA FIRE_RISK
H009	22	8			SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	0	2	2 0	2	2 0	2	0	2	0	0	2	10		WATSONIA FIRE_RISK
H009	23	200.6 8	202.28	1.6	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	2	! 1	1	1	1	2	2	2	2	0	0	8	8	WATSONIA FIRE_RISK
H009	24	202.2 8	202.68	0.4	SOUTH WEST HIGHWAY	South	2/10/2007	40	0 0	0	0 0	0 0	C	0 0	0	0	0	0	2	2	2	2	WATSONIA LOVE_GRASS FIRE_RISK
H009	25	8	204.27		SOUTH WEST HIGHWAY	South	2/10/2007		0 0	0	C	) 0	C	) ()	0	0	0	0	0	0	0		WATSONIA LOVE_GRASS FIRE_RISK
H009	26	204.2 7	204.97	0.7	SOUTH WEST HIGHWAY	South		Unknown	O	0	C	0 0	C	0 0	0	0	0	0	2	2	2	2	WATSONIA PATTERSONS_CURSE FIRE_RISK
H009	27	204.9 7	206.39		SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	2	! 1	1	2	2 2	2	2	2	2	0	1	9		WATSONIA FIRE_RISK
H009	28	206.3 9	208.17	1.78	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	1	1	1	1	1	2	1	1	1	0	0	7	5	WATSONIA FIRE_RISK
H009	29	208.1 7	209.27	1.1	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	0	1	C	) 1	C	) 1	0	1	0	1	1	0	1	5	FIRE_RISK
H009	30	209.2 7	210.07	0.8	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	0	0	C	0 0	C	0 0	0	0	0	0	2	1	2	1	WATSONIA LOVE_GRASS FIRE_RISK
H009	31	210.0 7	211.12	1.05	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	1	1	C	) 0	C	0 0	1	1	0	0	1	0	3	2	WATSONIA FIRE_RISK
H009	32	211.1 2	211.82	0.7	SOUTH WEST	South	2/10/2007	Unknown	1	1	C	) 0	C	) (	0	0	0	0	1	0	2	1	FIRE_RISK
H009	33	211.8 2	212.22	0.4	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	1	2	2 0	2	2 0	2	0	2	0	0	0	10	1	FIRE_RISK
H009	34	212.2 2	212.42	0.2	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	1	2	2 0	2	2 0	2	0	2	0	0	1	10	2	FIRE_RISK
H009	35	212.4 2	213.51	1.09	SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	2	2	: 1	1	1	1	1	1	2	2	0	0	7	7	WATSONIA FIRE_RISK
H009	36	213.5 1	215.82	2.31	SOUTH WEST HIGHWAY	South	2/10/2007	20	1	1	C	0 0	1	1	1	1	0	0	1	1	4	4	WATSONIA FIRE_RISK
H009	37	2	216.26		SOUTH WEST HIGHWAY	South	2/10/2007	Unknown	0	0	C	) 0	C	) 0	1	1	1	0	1	1	3	2	WILD_RADISH FIRE_RISK
H009	38	6	217.36		SOUTH WEST HIGHWAY	South	2/10/2007			1	1	1	1	1	1	1	0	0	1	1	5		WATSONIA BLACKBERRY FIRE_RISK
H009	39	217.3 6	217.86	0.5	SOUTH WEST HIGHWAY	South	2/10/2007	40	1	1	C	) 1	C	0 0	1	1	0	0	1	1	3	4	BRIDAL_CREEPER FIRE_RISK

Road#	Sect#		OD Finish (km)	Sect length	Road Name	Direction	Date	Width	Native Vegeta	tion		ent of etation	P	ative lant ecies	W	/eeds	B	ue as liol. rridor		oining nduse	Val	servation ue Score (0-12)	Overlay Data
		()	(,					(m)	Left	Right	Left	Right			t Left	Right			Left	Right		Right	(Listed if Present)
H009	40	217.8 6	219.66		SOUTH WEST HIGHWAY	South	2/10/2007	40	) 1	0	0 0	) (	) (	) (	) 1		1 0	0	1	1	3	3 2	WATSONIA FIRE_RISK
M013	1	0	0.65		DONNYBROOK - KOJONUP RD	East	2/10/2007	-			0 0	) (	) (	) (	) C	) (	0 0	0	2	2 2	2 2	2 2	WILD_RADISH WATSONIA
M013	2	0.65	2.27		DONNYBROOK - KOJONUP RD	East	2/10/2007	40	2	0	) 1	(	) 2	2 (	) 1		1 2	2	0	) (	8 (	-	
M013	3	2.27	2.6		DONNYBROOK - KOJONUP RD	East	2/10/2007	Unknown	2	2	2 2	2 2	2 2	2 2	2 1		1 2	1	0	) (	) 9	8	AFRICAN _LOVE_GRASS
M013	4	2.6	3.4	0.8	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	0 0	0	0 0	) (	) (	) (	D C	) (	0 0	0	2	2	2 2	2 2	AFRICAN _LOVE_GRASS WILD RADISH
M013	5	3.4	4.3		DONNYBROOK - KOJONUP RD	East	2/10/2007	40	2	2	2 2	2 1	1 2	2	1 1		1 0	0	2	2 1	9	) 6	
M013	6	4.3	6.28	1.98	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	0 0	0	0 0	) (	) (	) (	) C	) (	0 0	0	1	1	1	1	WATSONIA
M013	7	6.28	8.5	2.22	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	2	2	2 1	1	1 1	2	2 1		1 0	0	1	1	6	6 7	AFRICAN_LOVE_GRAS
M013	8	8.5	10.5	2	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	2	2 0	) 2	2 1	2	2 1		1 0	0	1	1	4	8	BLACKBERRY
M013	9	10.5	12.4	1.9	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	0 0	2	2 0	) 1		) 2	2 0	) .	1 0	0	2	2 1	2		AFRICAN_LOVE_GRAS
M013	10	12.4	14.11	1.71	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	2	2 0	) 1		) 2	2 1		1 0	0	2	! 1	4	l 7	AFRICAN_LOVE_GRAS
M013	11	14.11	15.4	1.29	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	2	2 0	) 1		) 2	2 1		1 0	0	1	1	3	3 7	AFRICAN_LOVE_GRAS
M013	12	15.4	16	0.6	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	2	2	2 1	1	1 2	2 2	2 1		1 0	0	2	2 1	8	3 7	AFRICAN_LOVE_GRAS
M013	13	16	17.68	1.68	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	2	2 0	) 1	1 C	) 2	2 1		1 0	0	2	! 1	4	l 7	WATSONIA
M013	14	17.68	19		DONNYBROOK - KOJONUP RD	East	2/10/2007	40	0 0	2	2 0	) 1	1 C	) 2	2 C	) .	1 0	0	0	1	0	) 7	WATSONIA
M013	15	19	20.9	1.9	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	1	0	) 1	1 C	)	1 C	) (	0 0	0	2	2 2	2 3		AFRICAN_LOVE_GRAS S WATSONIA
M013	16	20.9	22.6	1.7	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	2	2 0		1		1 1		1 0	1	1	1	4	1 7	WILD_RADISH AFRICAN_LOVE_GRAS S_TREE_WEEDS
M013	17	22.6	23.5	0.9	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	1	0	) (	) C	) ^	1 1	(	0 0	1	1	1	3	3 4	
M013	18	23.5	24.4	0.9	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	0 0	2	2 0	) 1	1 C	) ^	1 C	)	1 0	1	1	1	1	7	
M013	19		26		DONNYBROOK - KOJONUP RD	East	2/10/2007	40	) 1	2	2 0	) 1	1 1		1 1		1 0	2	1	1	4		AFRICAN_LOVE_GRAS S WATSONIA
M013	20		26.7	0.7	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	2	2	2 1	1	1 2	2	1 2	2	1 0	2	. 1	1	8 1		AFRICAN_LOVE_GRAS S WATSONIA
M013	21	26.7	28.1	1.4	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	1	2	2 0	) 1	1 C	)	1 C	) .	1 0	2	1	1	2	2 8	AFRICAN_LOVE_GRAS S

Road#		OD Start (km)	-	Sect length	Road Name	Direction	Date	Width	Native Vegeta	ation	Veg	ent of etation	PI Spe	ative ant ecies		eeds	B Cor	iol. ridor	Lar	oining nduse	Val	ue Score (0-12)	Overlay Data
								(m)	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	(Listed if Present)
M013	22	28.1	28.7	0.6	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	C	0 0	C	C	0 0	0	0	0	0	0	1	2	1	2	AFRICAN_LOVE_GRAS
M013	23	28.7	29.6	0.9	Donnybrook - Kojonup RD	East	2/10/2007	40	C	2	C	1	0	0	0	1	0	0	1	1	1	5	AFRICAN_LOVE_GRAS
M013	24	29.6	31.5	1.9	Donnybrook - Kojonup RD	East	2/10/2007	40	C	2	C	1	0	1	0	0	0	1	1	1	1		AFRICAN_LOVE_GRAS
M013	25	31.5	34	2.5	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	1	2	C	1	1	1	1	0	0	1	1	1	4	. 6	AFRICAN_LOVE_GRAS
M013	26	34	35.3	1.3	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	1	2	C	1	1	2	1	1	0	1	1	1	4	. 8	WATSONIA
M013	27	35.3	36	0.7	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	1	2	C	2	2 1	2	1	1	1	1	1	1	5	g	AFRICAN_LOVE_GRAS S WILD_RADISH
M013	28	36	37.5	1.5	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	C	) 1	C	C	) 0	0	0	0	0	0	1	2	1	3	8
M013	29	37.5	38.1	0.6	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	C	) 1	C	C	) 0	0	1	0	0	0	1	2	2	3	8
M013	30	38.1	38.4	0.3	DONNYBROOK - KOJONUP RD	East	2/10/2007	40	C	2	C	2	2 0	2	0	2	0	1	1	0	1	g	
M013	31	38.4	39.2	0.8	Donnybrook - Kojonup RD	East	2/10/2007	40	1	2	1	2	2 1	2	2	2	0	1	1	0	6	s g	
M013	32	39.2	39.91	0.71	Donnybrook - Kojonup RD	East	2/10/2007	40	2	2 2	2	2	2 2	2	2	2	2	1	0	0 0	10	g	
M042	1	21.49	22.1	0.61	GOODWOOD RD	East	9/11/2007	unknown	2	2 2	1	2	2 1	2	2	2	0	2	1	0	7	10	FIRE_RISK
M042	2	22.1	24.22	2.12	GOODWOOD RD	East	9/11/2007	0	2	2 2	1	2	2 1	2	1	2	0	1	2	2 0	7	9	FIRE_RISK
M042	3	24.22	24.74		GOODWOOD RD	East	9/11/2007	0	1	1	C	0 0	) 1	1	1	1	0	0	2	2 2	5		FIRE_RISK
M042	4	24.74	25.06		GOODWOOD RD	East	9/11/2007	0	2	2 2	1	1	1	1	2	2	2	2	2	2 2	10	10	FIRE_RISK
M042	5	25.06	25.68		GOODWOOD RD	East	9/11/2007	0	1	0	C	0 0	0 0	0	0	-	0	0	_	2 2	3		PIRE_RISK
M042	6	25.68	26.9	1.22	GOODWOOD RD	East	9/11/2007	0	2	2 2	1	1	1	1	2	2	2	2	1	1	9	9	FIRE_RISK

### Key to table interpretation:

<u>OD Start/Finish</u>: is the odometer reading for the section start and finish points.

Direction: is the direction travelled by the surveyors when assessing the roadside.

Width: is the width of the road reserve.

The following attributes are ranked from 0 (lowest level) to 2 (highest level) as per the descriptions below.

Native Vegetation: score based on the number of native vegetation layers present (ie) tree, shrub and/or ground cover layers.

Extent of Vegetation: score is based on the proportion of native vegetation in the total roadside vegetation.

#Native Plant Species: score is based on the diversity of plants species in the roadside vegetation.

Value as Biological Corridor: score is based on the number of roadside vegetation attributes present that are important as fauna habitat.

Adjoining Landuse: score is based on the extent of native vegetation in the surrounding landscape (higher scores indicate lower levels of native vegetation in the surrounding landscape).

Weeds: score is based on level of weed infestation (higher scores indicate lower levels of weed infestation).

## Appendix

3

## **APPENDIX 3**

## Road names and lengths: Shire of Donnybrook-Balingup

(Source: Main Roads WA 2008)

Road Number         Road Name         Road length           2170290         ADRIAN'S RD - NEW         2170160         AIRSTRIP RD           2170100         AIRSTRIP RD         217017         217011         ALLNUTT ST           2170134         AMMON RD         217013         217013         AMMON RD           2170136         AMMON RD         217013         217013         217013           2170129         ANDERSON RD         2170297         2170297         2170297           2170297         ARBORETUM RD         2170297         2170297         2170297           2170297         ARBORETUM RD         2170297         2170297         2170297           2170297         ARBORETUM RD         2170297         2170297         2170297         2170297           2170297         ARBORETUM RD         2170297         2170040         2170040         2170040         2170040         2170040         2170040         2170040         2170040         217024         2170040         217024         217024         217024         217024         217024         217024         217024         217024         217024         217024         217024         217024         217024         217003         2170034         2170034         2170034	0.17 3.08 1.07 6.44 1 2.82 0.12 1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170160       AIRSTRIP RD         2170011       ALLNUTT ST         2170134       AMMON RD         2170136       AMMONS TRACK         2170129       ANDERSON RD         2170297       ARBORETUM RD         2170040       ARGYLE RD         2170035       ATHERTON RD         2170048       ATTWOOD RD         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGUP RACE COURSE RD         2170038       BALINGUP-NANNUP RD         2170048       BATHGATE RD         217038       BALINGUP ST         2170038       BALINGUP ST         2170148       BATHGATE RD         2170033       BAXTER ST	3.08 1.07 6.44 1 2.82 0.12 1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170011       ALLNUTT ST         2170134       AMMON RD         2170136       AMMONS TRACK         2170129       ANDERSON RD         2170297       ARBORETUM RD         2170040       ARGYLE RD         2170035       ATHERTON RD         2170048       ATTWOOD RD         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGAD RIVE         2170308       BALINGUP RACE COURSE RD         2170075       BANGADANG RD         2170148       BATHGATE RD         2170033       BAXTER ST	1.07 6.44 1 2.82 0.12 1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170134       AMMON RD         2170136       AMMONS TRACK         2170129       ANDERSON RD         2170297       ARBORETUM RD         2170040       ARGYLE RD         2170035       ATHERTON RD         2170048       ATTWOOD RD         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGA DRIVE         217038       BALINGUP RACE COURSE RD         2170075       BANGADANG RD         2170033       BATHGATE RD         217033       BAXTER ST	6.44 1 2.82 0.12 1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170136       AMMONS TRACK         2170129       ANDERSON RD         2170297       ARBORETUM RD         2170040       ARGYLE RD         2170035       ATHERTON RD         2170048       ATTWOOD RD         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGA DRIVE         2170308       BALINGUP RACE COURSE RD         2170075       BANGADANG RD         2170033       BAXTER ST	1 2.82 0.12 1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170129       ANDERSON RD         2170297       ARBORETUM RD         2170040       ARGYLE RD         2170035       ATHERTON RD         2170048       ATTWOOD RD         2170231       B MARSHALL RD (NO NAME)         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGA DRIVE         2170308       BALINGUP RACE COURSE RD         2170075       BANGADANG RD         2170148       BATHGATE RD         217033       BAXTER ST	0.12 1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170297       ARBORETUM RD         2170040       ARGYLE RD         2170035       ATHERTON RD         2170048       ATTWOOD RD         2170231       B MARSHALL RD (NO NAME)         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGA DRIVE         2170308       BALINGUP RACE COURSE RD         2170075       BANGADANG RD         2170148       BATHGATE RD         2170033       BAXTER ST	0.12 1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170040       ARGYLE RD         2170035       ATHERTON RD         2170048       ATTWOOD RD         2170231       B MARSHALL RD (NO NAME)         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGA DRIVE         217038       BALINGUP RACE COURSE RD         2170075       BANGADANG RD         2170148       BATHGATE RD         2170033       BAXTER ST	1.53 2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170035       ATHERTON RD         2170048       ATTWOOD RD         2170231       B MARSHALL RD (NO NAME)         2170256       BAILEY HTS         2170284       BALIEU ST         2170282       BALINGA DRIVE         217038       BALINGUP RACE COURSE RD         217037       BALINGUP-NANNUP RD         2170075       BANGADANG RD         2170148       BATHGATE RD         2170033       BAXTER ST	2.39 3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170048ATTWOOD RD2170231B MARSHALL RD (NO NAME)2170256BAILEY HTS2170284BALIEU ST2170321BALINGA DRIVE2170282BALINGUP RACE COURSE RD2170308BALINGUP-NANNUP RD2170075BANGADANG RD2170148BATHGATE RD2170033BAXTER ST	3.3 0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170231B MARSHALL RD (NO NAME)2170256BAILEY HTS2170284BALIEU ST2170321BALINGA DRIVE2170282BALINGUP RACE COURSE RD2170308BALINGUP-NANNUP RD2170075BANGADANG RD2170148BATHGATE RD2170033BAXTER ST	0.17 0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170256BAILEY HTS2170284BALIEU ST2170321BALINGA DRIVE2170282BALINGUP RACE COURSE RD2170308BALINGUP-NANNUP RD2170075BANGADANG RD2170148BATHGATE RD2170033BAXTER ST	0.92 0.12 0.85 0.23 21.6 2.78 2.23
2170284BALIEU ST2170321BALINGA DRIVE2170282BALINGUP RACE COURSE RD2170308BALINGUP-NANNUP RD2170075BANGADANG RD2170148BATHGATE RD2170033BAXTER ST	0.12 0.85 0.23 21.6 2.78 2.23
2170321BALINGA DRIVE2170282BALINGUP RACE COURSE RD2170308BALINGUP-NANNUP RD2170075BANGADANG RD2170148BATHGATE RD2170033BAXTER ST	0.85 0.23 21.6 2.78 2.23
2170282BALINGUP RACE COURSE RD2170308BALINGUP-NANNUP RD2170075BANGADANG RD2170148BATHGATE RD2170033BAXTER ST	0.23 21.6 2.78 2.23
2170308BALINGUP-NANNUP RD2170075BANGADANG RD2170148BATHGATE RD2170033BAXTER ST	21.6 2.78 2.23
2170075         BANGADANG RD           2170148         BATHGATE RD           2170033         BAXTER ST	2.78 2.23
2170148         BATHGATE RD           2170033         BAXTER ST	2.23
2170033 BAXTER ST	
	0.19
	5.95
2170031 BENDALL RD	1.35
2170099 BENTLEY RD	1.2
2170002 BENTLEY ST	2.56
2170219 BEST RD (F)	8.78
2170263 BILLINGHURST RD	1.03
2170307 BIRDWOOD PARK DRIVE	0.35
2170169 BIRDWOOD PARK RD	0.32
2170116 BLIGH ST	0.59
2170196 BOND ST	0.5
2170190 BOULDER ST	0.21
2170305 BOUNDARY RD	0.67
2170049 BOWMAN RD	2.25
2170264 BRAZIER RD	0.42
2170010 BRIDGE ST	0.96
2170178 BROCKMAN RD	0.25
2170168 BROOK ST	0.26
2170018 BROOKHAMPTON RD	18.22
2170069 BYRON RD	1.74
2170070 BYRON SPUR RD	0.58
2170113 CAIN RD	0.72
2170066 CAMELUP RD	5.16
2170300 CAMILLERI STRET	0.09
2170332 CAMP GULLY RD	3.63
2170268 CAMPBELL ST	0.19
2170043 CAREY ST	0.14
2170217 CAREY ST	0.1
2170280 CASSIA RD - NEW	4.2
2170205 CASTLE PL	0.28
2170289 CASTLE ST - NEW (KIRUP)	1.57
2170022 CEMETERY RD	0.79

Road Number	Road Name	Road length (km)
2170163	CEMETERY RD	0.53
2170260	CENTRAL AVE	0.23
2170079	CHAPMAN RD	1.61
2170014	CHARLEY CREEK RD	10.2
2170237	CHARLTON RD	1.16
2170230	CHERRYDALE WAY	0.55
2170030	CHESTNUT DRIVE	3.05
2170186	CIRILLO RD	1.24
2170121	CLAYMORE RD	6
2170277	CLIFF'S RD - NEW	0.05
2170003	COLLINS ST	1
2170078	COMPAGNONE RD	0.35
	CORA ST	0.34
	CRACKNELL PL	0.15
	CROSS RD	0.44
	CROWLEY PL	0.15
2170154		15.46
2170044		0.19
2170249		0.35
2170243		0.07
2170213		1.55
2170039	DE LISLE ST	0.59
2170103	DE LISLE ST	
		0.42
2170184	DHU RD	<u> </u>
2170059		
2170060	DHU SPUR RD	0.95
2170270		0.13
2170324	DOWRICK RD	0.63
2170101	DUBOIS RD	1.29
2170301	EDEN VALLEY ACCESS	0.87
2170210		0.53
2170317	EEDLE DALE RD	0.29
2170100		0.45
2170107	EGAN ST	0.48
2170257	ELIOTT RI	0.4
	ELLIOTT ST	0.41
	EMERALD ST	1
	EWARTS RD	5.67
	F SAMSA RD (NO NAME)	0.37
	FARLEY RD	4.96
	FARLEYS SPUR	0.21
	FERGUSON RD	4.8
	FIELDS RD	1.98
2170302		2.37
2170081		0.24
	FLEET ST	0.89
	FORREST RD	3.14
2170173	FORREST ST	0.36
2170283	FOWLER RD - NEW	0.29
2170241	FOWLER ST	0.34
	FRAMMARTINO RD	1.74
2170097		0.67
	FROST RD	0.83
	GARDENER RD	3.52
	GARDINER RD	0.45
2170073		0.76

Road Number	Road Name	Road length (km)
2170085	GARDINER RD	0.65
2170220	GAVINS RD (F)	11.4
2170086	GEMMELL RD	2.1
2170278	GERALDINES RD	0.47
2170145	GLENARDEN RD	4.98
2170215	GOLF CLUB RD	0.34
2170053	GOODWOOD RD	2.2
2170322	GRANDIS GV	0.06
2170132	GREENBUSHES RD	11
2170141	GRIMWADE RD	31.92
2170138		16.24
2170061	GRIST RD	1.89
2170335	GRUMS RD	0.1
2170151	GUBLERS RD	1.6
	GUIDICI RD	0.36
	HACKETT RD	1.06
	HAMILTON ST	1.09
2170200	HARDY PL	0.39
	HAWTER RD	2.45
2170100		0.35
2170202		5.8
	HEARLE RD	3.08
	HEARMAN & SHARP (NO NAME)	0.89
2170243	· · · · · ·	0.89
2170222		
		0.91
2170319		2.5
2170274		3.08
2170114		0.23
2170020		3.99
2170008		4.14
2170041	JARRAHWOOD RD	3.57
2170130		8.29
2170172		0.3
2170291	JEFFREY'S RD - NEW	0.07
2170286		1
2170240		0.45
	JONES RD	0.79
	JONES RD	2.7
	K MILLER RD (NO NAME)	0.3
	KATRINA HEIGHTS	0.35
	KELLY ST	1.9
	KELPIE RD - NEW	0.15
2170202		0.68
2170027		8.71
2170253		1.14
2170127		13.62
2170279		0.68
2170221		1.9
	L. AMMON RD	0.44
	LEACH RD	0.8
	LECHENAULTIA CIRCLE (LEFT)	0.29
	LECHENAULTIA CIRCLE (RIGHT)	0.09
2170228	LEE RD	0.39
2170082	LESTER FARLEY RD	0.29
2170188	LEWANA RD (F)	1.7
2170199	LITTLE RD	2.38

Road Number	Road Name	Road length (km)
2170125	LOGIUDICE RD	0.87
2170029	LOWDEN GRIMWADE RD	19.72
2170166	LUKIS RD	1.46
2170207	LUKIS ST	0.28
2170096	LYONS RD	1.31
2170023	MACQUARIE ST	1.81
2170157	MADER RD	4.18
2170159	MAIDMENT RD	5.08
2170149	MAILMAN RD	8.21
2170046	MANDALAY RD	5.17
2170150	MARDAWARRA RD	3.19
2170310	MARGINATA DRIVE	0.28
2170006	MARMION ST	0.84
2170055	MARSHALL RD	4.28
2170306	MARTELLA RD	0.13
2170233	MARWICK RD	0.88
2170259	MASLIN ST	0.34
2170327	MAUGER RD	0.3
2170229	MCGUTCHEON RD	0.35
2170223	MEAD ST	0.73
2170200	MEAGHER RD	1.41
2170181	MEAGHER RD MENARD ACCESS - NEW	0.61
2170292	MENARD ACCESS - NEW	1.94
2170200	MERTIFIELD VIEW	1.94
2170206		0.11
2170209	MILLER RD	0.87
2170193	MILO RD	2.73
2170057	MITCHELL RD	3.37
2170201	MITCHELL SPUR	1.25
2170152	MITCHELL ST	0.64
2170331	MONTGOMERY RD	0.98
2170176	MOORE ST	0.26
2170063	MORGAN RD	1.8
2170102	MORRISSEY RD	3.5
2170156	MULLALYUP RD	4.1
2170218		3.73
	NASH PLACE	0.77
	NEEDES HILL RD	1.15
	NEWLANDS RD	3.14
	NEWMAN RD	0.32
	NIEUWENHUYZE RD	1.69
2170315		1.75
2170311		0.1
	OFF CAMELUP RD (NO NAME)	1.71
	OFF MORGAN RD (NO NAME)	0.55
2170250	OFF UPPER CAPEL RD (NO NAME)	0.2
2170244	OFF VERNON RD (NO NAME)	0.25
2170248	OFF WHITES RD (NO NAME)	1.2
2170180	OFFERS RD	1.61
2170036	OLD BROOKHAMPTON RD	5
2170336		0.1
2170143		2.35
	OLDMEADOW RD	0.95
	OXFORD ST	0.18
2170198		0.23
2170192		1.35

Road Number	Road Name	Road length (km)
2170295	PAPALIAS RD	0.61
2170090	PASQUINI RD	0.84
2170105	PATANE RD	1.94
2170042	PEARLS RD	1.43
2170288	POSSUM RD - NEW	0.43
2170054	PRESTON PARK RD	0.37
2170224	PRICE RD	3.07
2170131	PROWSE RD	2.06
2170051	PUGSLEY RD	1.5
2170155	RADFORD RD	2
2170182	RADFORDS RD	0.97
2170187	RADIATA RD (F)	10.5
2170271	RAILWAY RESERVE RD	0.6
2170261	RAILWAY ST	0.37
2170232	RAINBOW DOWNS	0.46
2170009	RAMSAY TCE	0.49
2170316	RANGEVIEW HEIGHTS	0.29
2170179	RANSON RD	1.09
2170122	RAVENSCLIFFE RD	16.14
2170109	RECREATIONAL DRIVE	0.1
2170298	REGENT ST	0.1
2170001	RESERVE ST	0.38
2170062	RIVER RD	1.2
2170171	ROBERTS ST	0.76
2170281	ROB'S RD - NEW	0.38
2170304		0.34
2170323	ROSEGUM COURT	0.07
2170223	RUSSELL CT	0.15
2170239	RUSSELL RD	0.29
2170245	RUSSELL TRIGWELL RD (NO NAME)	0.24
2170158	RUSSELLS RD	1.12
2170117	RYALLS RD	10.74
2170093	SADDLETON RD	0.22
2170303		0.03
2170338	SAM 2	0.1
2170019		6.2
	SEARS CLOSE	0.31
	SHAMROCK ST	0.08
	SHARP RD	2.24
2170212		0.12
2170108		0.58
2170191	SHORTELL RD	0.1
2170088		0.35
2170195		0.45
2170142		20.22
	SPENCER RD	0.1
	SPRING GULLY RD	1.43
	SPRUCE RD (F)	1.21
2170012	· · ·	0.18
	STATION ST	0.16
2170216		0.31
2170210		0.59
	STEERE ST	1.06
	STEERE ST EAST	0.2
	STRANG RD - NEW	0.91
2170233	STREMPEL WAY	0.13
2170310		0.13

Road Number	Road Name	Road length (km)
2170269	TALLOWWOOD DRIVE	0.84
2170068	TASSONE RD	1.46
2170170	TEEDE ST	0.12
2170118	THOMAS RD	3.89
2170005	THOMSON BROOK RD	10.23
2170104	THOMSON RD	2.16
2170247	THOMSON ST	0.78
2170194	TIMMS ST	0.27
2170087	TORRIDON RD	2.37
2170204	TORRISI PL	0.21
2170065	TOWERS RD	2.18
	TOWERS RD	0.1
	TRAMLINE RD	0.67
	TREVENA RD	6.37
	TRIGWELL RD	0.97
	TRIGWELL ST	0.76
	TRIGWELL ST EAST	0.69
2170091	TUCKER RD	0.44
	TUIA RD	0.89
	TUIA RD	5.5
	TURNERS ACCESS RD	1
	UNION ST	0.48
2170028	UNION ST SOUTH	0.32
2170225	UNKNOWN-OFF PROWSE SHORT CUT	1.02
2170007	UPPER CAPEL RD	27.03
	VALENTINE RD	3.06
	VALLELONGA RD - NEW	0.44
	VERNON RD	5.25
2170197	VICTORIA PDE	0.26
	VICTORY LA	0.11
	WADE RD	3.19
2170139		6.5
2170242		1.35
2170164		1.29
2170135	WALTERS TRACK	3.16
2170255		1.31
	WATERS RD	0.24
	WATTLE COURT	0.37
	WESTLINGTON RD	0.93
	WHITE RD	6.05
2170258		0.48
2170226		3.53
2170137	WILGA RD	10.86
2170137	WILLIAM RD	0.48
2170032		0.77
2170120	WISHART RD	1.6
2170128	WOOD RD	0.13
	WOOD RD WRINGE RD - NEW	1.27
	YABBERUP RD	1.89
	YELVERTON RD	0.48
	YELVERTON ST KIRUP	0.48
	YELVERTON ST KIROP	0.08
2170024	TELVERTON ST SOUTH	0.34

### **APPENDIX 4**

### Flora species in the Shire of Donnybrook- Balingup (Source: W.A Herbarium)

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

P = Priority species R = Rare species

Acacia alata var. alata Acacia applanata Acacia browniana var. browniana Acacia browniana var. obscura *Acacia dealbata *Acacia dealbata subsp. dealbata Acacia dentifera Acacia divergens Acacia extensa Acacia flagelliformis P4 Acacia huegelii Acacia insolita subsp. insolita Acacia lateriticola Acacia mearnsii *Acacia melanoxylon Acacia mooreana Acacia myrtifolia Acacia nervosa Acacia obovata Acacia preissiana Acacia pulchella Acacia pulchella var. glaberrima Acacia pulchella var. pulchella Acacia saligna subsp. pruinescens Acacia saligna subsp. stolonifera Acacia semitrullata P3 Acacia stenoptera Acacia teretifolia Acacia urophylla Acacia varia var. varia *Acaena echinata *Acaena echinate var. echinata Acaena novae-zelandiae Acetosella vulgaris Actinotus glomeratus Adenanthos meisneri Adenanthos obovatus Adenanthos sp. Whicher Range (G.J. Keighery 9736) Adiantum aethiopicum Agrostocrinum hirsutum *Aira cupaniana *Allium triquetrum Allocasuarina fraseriana Allocasuarina humilis Allocasuarina thuyoides Alternanthera denticulata Alternanthera nodiflora Amperea simulans Amphipogon amphipogonoides Amphipogon debilis Amphipogon laguroides subsp. laguroides Amphipogon turbinatus Anagallis arvensis Anagallis arvensis var. arvensis Anagallis arvensis var. caerulea Anarthria gracilis Anarthria prolifera Anarthria scabra Andersonia caerulea Andersonia involucrata Andersonia lehmanniana Anigozanthos bicolor Anigozanthos bicolour subsp. decrescens Anigozanthos flavidus Anigozanthos humilis subsp. humilis

Anigozanthos manglesii subsp. manglesii Anthemis cotula Y Aotus cordifolia P3 Aphelia cyperoides Arctotheca calendula *Asparagus asparagoides Asplenium aethiopicum P4 Astartea sp. Juniperina (G.J. Keighery 9558) Asteridea pulverulenta Astroloma ciliatum Astroloma drummondii Astroloma pallidum Austrodanthonia pilosa Austrostipa compressa Austrostipa flavescens Babiana angustifolia Baeckea camphorosmae Baeometra uniflora Banksia grandis Banksia seminuda Banksia sphaerocarpa var. sphaerocarpa Bartsia trixago Baumea preissii subsp. laxa Baumea rubiginosa Billardierafloribunda Billardierafraseri Billardierafusiformis Billardieravariifolia Bolboschoenus caldwellii *Borago officinalis Boronia crenulate subsp. pubescens Boronia defoliata Boronia dichotoma Boronia fastigiata Boronia humifusa P1 Boronia megastigma Bossiaea aquifolium subsp. aquifolium Bossiaea eriocarpa Bossiaea linophylla Bossiaea ornata Brachyscome iberidifolia *Brassica napus *Brassica tournefortii *Briza maxima *Briza minor *Bromus diandrus *Bromus hordeaceus *Bromus madritensis Buellia stellulata

Caesia micrantha Caladenia attingens subsp. attingens

Caladenia ferruginea

Burchardia congesta

Burchardia multiflora

Caladenia flava Caladenia flava subsp. flava Caladenia infundibularis Caladenia lobata Caladenia longiclavata Caladenia macrostylis Caladenia marginata Caladenia nana subsp. nana Caladenia nana subsp. unita Caladenia reptans subsp. reptans Caladenia uliginosa subsp. candicans Caladenia uliginosa subsp. uliginosa Calicium abietinum Calicium glaucellum Calothamnus pallidifolius Calothamnus sanguineus Calytrix flavescens Calytrix leschenaultii Calytrix variabilis Carthamuslanatus Cartonema philydroides Cassytha glabella Cassytha racemosa Caustis sp. Boyanup (G.S. McCutcheon 1706) P1 Centaurium erythraea Centipeda cunninghamii Centrolepis aristata Centrolepis pilosa Chamaescilla corymbosa Chamaescilla corymbose var. corymbosa Cheiranthera parviflora Chenopodium ambrosioides Chordifex laxus **Choretrum** lateriflorum Choretrum pritzelii Chorizandra enodis Chorizema cordatum Chorizema glycinifolium Chorizema retrorsum Chorizema rhombeum Chrysothrix candelaris Cicendia filiformis Cladia aggregata Cladia schizopora Cladonia capitellata Cladonia cervicornis subsp. verticillata Cladonia krempelhuberi Cladonia ochrochlora Cladonia ramulosa Cladonia rigida Cladonia scabriuscula Cladonia sulcata Cladonia tessellata Clematis pubescens Comesperma calymega Comesperma ciliatum Comesperma virgatum Conospermum capitatum Conospermum capitatum subsp. glabratum Conospermum flexuosum subsp. laevigatum Conostephium pendulum Conostylis aculeata Conostylis aculeate subsp. aculeata Conostylis serrulata Conostvlis setigera Conostylis setigera subsp. setigera *Conyza parva Conyza sumatrensis Cortaderiaselloana Corvbas abditus Corybas recurvus Corymbia calophylla Corymbia haematoxylon Cotula australis Crepis foetida subsp. foetida

Cryptostylis ovata

Cuscuta epithymum Cyanicula sericea Cyathochaeta avenacea Cyathochaeta equitans Cynara cardunculus subsp. flavescens *Cyperus tenellus Cyrtostylis huegelii Cyrtostylis robusta Cyrtostylis tenuissima Cytogonidium leptocarpoides

Dampiera alata Dampiera hederacea Dampiera linearis Darwinia citriodora Dasypogon bromeliifolius Dasypogon hookeri Datura stramonium Daucus glochidiatus Daviesia cordata Daviesia costata Daviesia decurrens Daviesia divaricata Daviesia elongata **Y** 

### Daviesia horrida

Daviesia incrassate subsp. incrassata Daviesia inflata Daviesia physodes Daviesia rhombifolia Desmocladus asper Desmocladus fasciculatus

### Desmocladus flexuosus

Deyeuxia quadriseta Dianella revoluta Dichelachne crinita Dillwynia uncinata Diplolaenadrummondii Dipogon lignosus Disa bracteata Diuris corymbosa Diuris emarginata Dodonaea ceratocarpa Dodonaea viscose subsp. angustissima Drakaea livida Drosera bulbosa Drosera erythrorhiza Drosera erythrorhiza subsp. erythrorhiza Drosera gigantea subsp. gigantea Drosera glanduligera Drosera leucoblasta Drosera marchantii Drosera marchantii subsp. marchantii Drosera menziesii Drosera microphylla Drosera paleacea Drosera pallida Drosera rosulata Drosera stolonifera Dryandra lindleyana Dryandra lindleyana subsp. sylvestris Dryandra lindleyana var. lindleyana Dryandra lindleyana var. mellicula

Echinochloa crusgalli Echinopogon ovatus Echinopogon ovatus var. ovatus

### Ehrharta erecta

Elythranthera brunonis Elythranthera emarginata Epilobium billardiereanum subsp. cinereum Eragrostis brownii Eremocarpus setiger Eriochilus dilatatus subsp. magnus Eriochilus dilatatus subsp. multiflorus Eucalyptusaspersa Eucalyptusdecipiens Eucalyptusdecipiens subsp. decipiens Eucalyptusmarginata Eucalyptusmarginata subsp. marginata Eucalyptuspatens Eucalyptusrudis Euchiton collinus

Ficinia nodosa Flavoparmelia ferax Flavoparmelia haysomii Flavoparmelia soredians Freesia albax leichtlinii *Fumaria bastardii

Gahnia decomposita Galium divaricatum Gastrodia lacista Gastrolobium bilobum Gastrolobium ebracteolatum Gastrolobium praemorsum Gastrolobium retusum Gastrolobium spinosum Genista monspessulana Geranium retrorsum Geranium solanderi Gladiolus tristis Gladiolus undulatus Glischrocaryon aureum Glischrocaryon aureum var. angustifolium Glyceria maxima *Gomphocarpus fruticosus Gompholobium capitatum Gompholobium confertum Gompholobium cyaninum Gompholobium knightianum Gompholobium marginatum Gompholobium ovatum Gompholobium polymorphum Gompholobium preissii Gompholobium tomentosum Gonocarpus benthamii Gonocarpus paniculatus Goodenia arthrotricha  $\mathbf{P2}$ 

### Goodenia eatoniana

Goodenia pulchella subsp. Wheatbelt (L.W. Sage & F. Hort 795) Goodenia pusilla Gratiola peruviana Grevillea bipinnatifida subsp. bipinnatifida

Grevillea centristigma Grevillea diversifolia subsp. diversifolia Grevillea manglesioides

Grevillea mangiestolaes Grevillea pilulifera Grevillea pulchella subsp. ascendens

Grevillea quercifolia Grevillea ripicola **P4** Grevillea trifida

Haemodorum discolor Hakea amplexicaulis Hakea ceratophylla Hakea cyclocarpa Hakea lissocarpha Hakea prostrata Hakea ruscifolia Hakea stenocarpa Hakea varia Hardenbergia comptoniana Helichrysum luteoalbum Hemarthria uncinata var. uncinata Hemiandra pungens Hemigenia humilis Hemigenia incana Hemigenia pritzelii

### Hemigenia rigida P1

Heterodea muelleri Hibbertia amplexicaulis Hibbertia commutata Hibbertia cuneiformis Hibbertia diamesogenos Hibbertia ferruginea Hibbertia hypericoides Hibbertia hypericoides Hibbertia racemosa Hibbertia silvestris

### Hibbertia vaginata

*Hibiscus trionum var. trionum *Holcus lanatus Homalosciadium homalocarpum Hovea chorizemifolia Hovea elliptica Hovea trisperma Hyalosperma cotula Hyalosperma simplex subsp. simplex Hybanthus calycinus Hybanthus debilissimus Hybanthus floribundus subsp. floribundus Hydrocotyle callicarpa Hypocalymma angustifolium Hypocalymma cordifolium subsp.cordifolium

### Hypocalymma robustum

Hypochaeris glabra Hypogymnia subphysodes Hypogymnia subphysodes var. subphysodes Hypolaena exsulca Hypolaena fastigiata Hypoxis glabella var. leptantha

Hypoxis occidentalis Hypoxis occidentalis var. quadriloba

*Isolepis cernua var. setiformis

Isolepis cyperoides Isolepis fluitans var. fluitans Isolepis hookeriana *Isolepis marginata Isopogon buxifolius

Isopogon sphaerocephalus Isotropis cuneifolia *Ixia maculata *Ixia polystachya

Jacksonia furcellata Johnsonia acaulis Johnsonia lupulina Juncus amabilis Juncus bufonius Juncus caespiticius Juncus capitatus Juncus holoschoenus Juncus pallidus Juncus subsecundus

Kennedia carinata Kennedia coccinea Kennedia microphylla Kennedia prostrata Kennedia stirlingii *Kickxia spuria Kunzea recurva

Labichea punctata Lactuca serriola Lagenophora huegelii Lasiopetalum floribundum Lathyrus tingitanus *Lavandula stoechas Laxmannia sessiliflora Laxmannia sessiliflora subsp. australis Laxmannia squarrosa Lechenaultia biloba Lechenaultia expansa Lepidoblus chaetocephalus Lepidosperma effusum Lepidosperma leptostachyum Lepidosperma sp. Margaret River (B.J. Lepschi 1841)

### Lepidosperma squamatum

Lepidosperma tenue Lepidosperma tetraquetrum Leporella fimbriata Leptocarpus elegans Leptocarpus tenax Leptocerasmenziesii Leptomeria cunninghamii Leptomeria squarrulosa Leptospermum erubescens Lepyrodia glauca Lepyrodia muirii Leucopogon australis Leucopogon capitellatus Leucopogon carinatus Leucopogon conostephioides Leucopogon corifolius Leucopogon elatior Leucopogon glabellus Leucopogon mollis Leucopogon oxycedrus Leucopogon pendulus Leucopogon propinquus Leucopogon pulchellus Leucopogon reflexus Leucopogon sp. Margaret River (J. Scott 207)

### Leucopogon sprengelioides

Leucopogon striatus Leucopogon verticillatus Levenhookia preissii Levenhookia pusilla Lindsaea linearis *Linum trigynum Lobelia alata Lobelia gibbosa Logania campanulata Logania serpyllifolia Logania serpyllifolia subsp. angustifolia Logania serpyllifolia subsp. serpyllifolia Lomandra caespitosa Lomandra drummondii Lomandra hermaphrodita Lomandra integra Lomandra nigricans Lomandra pauciflora Lomandra preissii Lomandra sericea Lomandra sonderi *Lonicera japonica Lotus subbiflorus Loxocarya cinerea Loxocarya magna P3

*Lupinus angustifolius Luzula meridionalis Lyginia barbata Lyginia imberbis Lysinema ciliatum

Macrozamia riedlei Marianthus tenuis Meeboldina coangustata Meeboldina decipiens subsp. decipiens Meeboldina roycei Melaleuca incana subsp. incana Melaleuca lateritia Melaleuca parviceps Melaleuca preissiana Melaleuca rhaphiophylla Melaleuca thymoides Melaleuca viminea Melaleuca viminea

### Mesomelaena graciliceps

Mesomelaena tetragona Microlaena stipoides Millotia tenuifolia Mirbelia dilatata Monotaxis occidentalis Myriophyllum crispatum

### Neurachne alopecuroidea Nuytsia floribunda

Olax benthamiana Olearia paucidentata Opercularia apiciflora Opercularia hispidula Orobancheminor Orthrosanthus laxus var. laxus Orthrosanthus multiflorus

### Ottelia ovalifolia

Oxalis exilis Oxalis flava Oxalis glabra Pannoparmelia wilsonii Paraporpidia glauca Paraserianthes lophantha Parentucellia latifolia Parentucellia viscosa Parmelina conlabrosa

### *Paspalum distichum

Paspalum vaginatum Patersonia babianoides Patersonia juncea Patersonia occidentalis var. occidentalis Patersonia pygmaea Patersonia umbrosa Patersonia umbrosa var. xanthina Pelargonium littorale subsp. littorale *Pennisetum villosum Pentapeltispeltigera Pentapeltissilvatica Pericalymma ellipticum var. ellipticum Pericalymma spongiocaule Persicaria decipiens Persicaria prostrata Persoonia graminea Persoonia longifolia Persoonia saccata Petrophile linearis Petrophile striata Petrorhagia dubia Philotheca spicata Philydrellapygmaea subsp. pygmaea Phlebocarya ciliata Phyllanthus calycinus Pilostyles hamiltonii Pimelea angustifolia Pimelea ciliata subsp. ciliata Pimelea imbricata var. piligera Pimelea lehmanniana subsp. nervosa

Pimelea preissii Pimelea rosea subsp. rosea Pimelea suaveolens subsp. suaveolens

Pimelea sylvestris Piptatherum miliaceum Pithocarpapulchella var. melanostigma Platysace filiformis Platysace tenuissima Platytheca galioides Podocarpus drouynianus Podolepis gracilis Podolepis lessonii Poranthera huegelii Poranthera microphylla Potamogeton drummondii Praecoxanthus aphyllus Pteridium esculentum Pterostvlis barbata Pterostylis pyramidalis Pterostylis recurva Pterostylis sp. Crinkled leaf (G.J. Keighery 13426) Pterostylis vittata Ptilotus manglesii Ptilotus polystachyus Ptilotus sericostachyus subsp. sericostachyus Pultenaea ochreata Pultenaea reticulata Pultenaea verruculosa Pyrorchis nigricans Pyrrhospora laeta Pyrus communis Y

### Quinetia urvillei

Ramboldia stuartii Ranunculus amphitrichus Ranunculus colonorum *Raphanus raphanistrum Rhodanthe cirina Richardia brasiliensis *Rosa chinensis x multiflora *Rosa rubiginosa Rubus anglocandicans *Rubus ulmifolius var. ulmifolius

### *Sagina apetala

Scaevola calliptera Scaevola crassifolia Schoenus curvifolius Schoenus discifer Schoenus nanus Schoenus variicellae Selaginellagracillima *Senecio diaschides Senecio gilbertii P1 Senecio glomeratus subsp. glomeratus Senecio hispidulus Senecio multicaulis subsp. multicaulis *Setaria verticillata *Sigesbeckia orientalis *Silene gallica var. quinquevulnera Siloxerus multiflorus Silybum marianum Sisymbrium orientale Sonchus oleraceus Sowerbaealaxiflora *Sparaxis bulbifera *Sparaxis pillansii Spergula arvensis Sphaerolobium drummondii Sphaerolobium macranthum Sphaerolobium medium Sphaerolobium nudiflorum

Sphaerolobium scabriusculum Sphenotoma capitatum Stackhousia monogyna Stirlingia latifolia Stirlingia simplex Stylidium acuminatum Stylidium adnatum Stylidium affine Stvlidium amoenum Stylidium calcaratum Stylidium ciliatum Stylidium crassifolium Stylidium guttatum Stylidium junceum Stylidium petiolare Stylidium scandens Stylidium schoenoides Stylidium spathulatum Stylidium uniflorum Stylidiumutricularioides Styphelia tenuiflora Synaphea floribunda Synaphea gracillima Synaphea hians P3

### Synaphea petiolaris

Synaphea petiolaris subsp. triloba Synaphea sp. Donnybrook (B.J. Lepschi & T.R Lally BJL 3111) Synaphea sp. Pinjarra (R.Davis 6578) **R** 

Taxandria linearifolia Taxandria parviceps

Tetraria capillaris

Tetraria octandra Tetrarhena laevis Tetratheca affinis Tetratheca hirsuta Tetratheca parvifolia P3 Tetratheca setigera Tetratheca virgata Thelymitra crinita Thelymitra craphylla

### Thomasia glutinosa

Thomasia grandiflora Thomasia macrocalyx Thomasia purpurea Thryptomene saxicola Thysanothecium hookeri Thysanothecium scutellatum Thysanotus dichotomus Thysanotus gageoides P3 Thysanotus malgesianus Thysanotus multiflorus Thysanotus sparteus Thysanotus tenellus

### *Tolpis barbata

Tolpis virgata Trachymene pilosa Tremandra diffusa Tremandra stelligera Trichocline spathulata Tricoryne elatior Trifolium hybridum var. hybridum Trifolium subterraneum Triglochin huegelii Triglochin linearis Tripterococcus brunonis Tritonia crocata Tritonia lineata Trymalium floribundum subsp. trifidum *Ulex europaeus Usnea inermis Usnea subalpina Utricularia benthamii Utricularia violacea

Velleia trinervis Vellereophyton dealbatum Verbascumvirgatum Verbena bonariensis var. bonariensis Veronica calycina Verticordia densiflora var. densiflora

Villarsia latifolia Villarsia parnassiifolia Vinca major Wahlenbergia littoricola Wahlenbergia multicaulis Wahlenbergia stricta *Watsonia borbonica Watsonia meriana var. bulbillifera Watsonia meriana var. meriana *Watsonia versfeldii var. alba Wurmbea dioica

Xanthorrhoea acanthostachya Xanthorrhoea gracilis Xanthorrhoea preissii Xanthosia atkinsoniana Xanthosia candida Xanthosia ciliata Xanthosia huegelii Xylomelumoccidentale

*Zantedeschia aethiopica

# Appendix 5

### **APPENDIX 5**

### Fauna species in the Shire of Donnybrook-Balingup (Source: W.A Museum, 2008)

Information provided by Western Australian Museum, Fauna Base, latitude/longitude coordinates: -28.636, 115.148 and -29.032, 114.613

Note: not a comprehensive list.

* represents an introduced species.

BIRD SPECIES		
Acanthizidae	Acanthiza apicalis Acanthiza apicalis leeuwinensis	Inland Thornbill
	Acanthiza chrysorrhoa	Yellow-rumped Thornbill
Accipitridae	Accipiter fasciatus fasciatus Aquila audax Haliastur sphenurus	Brown Goshawk Wedge-tailed Eagle Whistling Kite
Aegothelidae	Aegotheles cristatus Aegotheles cristatus cristatus	Australian Owlet Nightjar Australian Owlet Nightjar
Ardeidae	Ardea alba modesta	
Climacteridae	Climacteris rufa	Rufous Treecreeper
Columbidae	Phaps chalcoptera	Common Bronzewing
Cracticidae	Cracticus torquatus	Grey Butcherbird
Cuculidae	Cacomantis flabelliformis Cacomantis flabelliformis flabelliformis Chrysococcyx lucidus plagosus	Fan-tailed Cuckoo
	Cuculus pallidus	Pallid Cuckoo
Dicaeidae	Dicaeum hirundinaceum	Mistletoebird
Falconidae	Falco berigora berigora Falco longipennis longipennis	Brown Falcon Little Falcon
Halcyonidae	Dacelo novaeguineae	Laughing Kookaburra
Laridae	Sterna leucoptera	White-winged Black Tern
Maluridae	Malurus elegans Stipiturus malachurus westernensis	Red-winged Fairy-wren
Meliphagidae	Acanthorhynchus superciliosus Anthochaera carunculata Melithreptus chloropsis Phylidonyris novaehollandiae longirosti	Western Spinebill Red Wattlebird White-naped Honeyeater <i>ris</i>
Meropidae	Merops ornatus	Rainbow Bee-eater
Neosittidae	Daphoenositta chrysoptera pileata	
Pardalotidae	Pardalotus punctatus xanthopyge	Yellow-rumped Pardalote

	Pardalotus striatus	Striated Pardalote
Passeridae	Stagonopleura oculata	Red-eared Firetail
Petroicidae	Eopsaltria australis griseogularis Eopsaltria georgiana Petroica cucullata Petroica multicolor campbelli	Western Yellow Robin White-breasted Robin Hooded Robin
Podargidae	Podargus strigoides Podargus strigoides brachypterus	Tawny Frogmouth
Podicipedidae	Tachybaptus novaehollandiae	Australian Grebe
Procellariidae	Pachyptila desolata	Antarctic Prion
Psittacidae Cockatoo	Calyptorhynchus banksii Calyptorhynchus banksii naso	Red-tailed Black-Cockatoo Forest Red-tailed Black
	Calyptorhynchus baudinii Calyptorhynchus latirostris Calyptorhynchus sp. Neophema elegans Platycercus icterotis Platycercus icterotis icterotis Platycercus spurius Platycercus zonarius Platycercus zonarius Platycercus anthopeplus	Baudin's Cockatoo Carnaby's Cockatoo Elegant Parrot Western Rosella Red-capped Parrot Ring-necked Parrot Twenty-eight Parrot Regent Parrot
Rallidae	Porzana tabuensis	Spotless Crake
Sturnidae	Sturnus vulgaris	European Starling
Turnicidae	Turnix varia varia	Painted Bustard-Quail
Tytonidae	Tyto novaehollandiae novaehollandiae	Masked Owl

MAMMAL SPECIES	3	
Bovidae	Bos Taurus*	Cow
Burramyidae	Cercartetus concinnus	Western Pygmy-possum
Cervidae	Dama dama	Fallow Deer
Dasyuridae	Dasyurus geoffroii Phascogale calura Phascogale tapoatafa Phascogale tapoatafa tapoatafa Sminthopsis gilberti Sminthopsis griseoventer griseoventer	Chuditch Red-tailed Phascogale Brush-tailed Phascogale Brush-tailed Phascogale Gilbert`s Dunnart Grey-bellied Dunnart
Leporidae	Oryctolagus cuniculus*	Rabbit
Macropodidae	Macropus fuliginosus Macropus irma Setonix brachyurus	Western Grey Kangaroo Western Brush Wallaby Quokka
Muridae	Hydromys chrysogaster Mus musculus	Water rat House mouse

	Rattus fuscipes Rattus rattus	Bush rat Black rat
Myrmecobiidae	Myrmecobius fasciatus	Numbat
Peramelidae	Isoodon obesulus fusciventer	
Phalangeridae	Trichosurus vulpecula vulpecula	Common Brushtail Possum
Pseudocheiridae	Pseudocheirus occidentalis	Western Ringtail Possum
Vespertilionidae	Chalinolobus gouldii Chalinolobus morio Nyctophilus geoffroyi Nyctophilus timoriensis timoriensis Vespadelus regulus	Gould`s wattled bat Chocolate Wattled Bat Lesser long-eared bat
REPTILE SPECIES		
Elapidae	Notechis scutatus Parasuta nigriceps Pseudonaja affinis affinis Simoselaps bertholdi	Tiger snake Black-backed snake Dugite Jan`s banded snake
Gekkonidae	Christinus marmoratus Diplodactylus granariensis granariensis	Marbled Gecko Wheatbelt Stone Gecko
Pygopodidae	Aprasia pulchella Aprasia repens	Granite Worm Lizard Sandplain Worm Lizard
Scincidae	Cryptoblepharus plagiocephalus Ctenotus delli Ctenotus labillardieri Egernia napoleonis Hemiergis initialis initialis Hemiergis peronii peronii Hemiergis peronii tridactyla Hemiergis quadrilineata Lerista distinguenda Menetia greyii Morethia lineoocellata Morethia obscura Tiliqua rugosa rugosa	Wall Skink Red-legged Southwestern Crevice Skink Five-toed Earless Skink Three-toed Earless Skink Three-toed Earless Skink Two-toed Earless Skink Common Dwarf Skink Woodland Flecked Skink Southwestern Bobtail
Typhlopidae	Ramphotyphlops australis	
Varanidae	Varanus rosenbergi	Southern Heath Monitor
FISH SPECIES		
Galaxiidae	Galaxias occidentalis Galaxiella munda Galaxiella nigrostriata	
Lepidogalaxiidae	Lepidogalaxias salamandroides	
Nannopercidae	Edelia vittata	
Percichthyidae	Bostockia porosa	

Percidae

Perca fluviatilis

Redfin Perch

### **AMPHIBIA SPECIES**

Hylidae	Litoria adelaidensis Litoria moorei	Slender Tree Frog Motorbike Frog
Myobatrachidae	Crinia georgiana Crinia glauerti Crinia pseudinsignifera Geocrinia leai Heleioporus eyrei Heleioporus inornatus	Quacking Frog Glauert`s Froglet Bleating Froglet Lea`s Frog Moaning Frog Whooping Frog

## Appendix 6



### **ROADSIDE CONSERVATION COMMITTEE**

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

### Introduction

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

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

The implementation of these simple guidelines by road managers for the removal of flora and timber material from the roadsides will ensure that the vegetated roadside reserve is maintained for its biodiversity values, and the benefit of the community and road users.

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

### Legislation.

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

Road and rail reserves are Crown land, and hence a licence is required to cut or remove any native flora from a roadside or rail line. There is, however, a legal provision by which the road manager or their agent (contractor) does not require a licence whilst undertaking legitimate road management activities, such as those approved under the *Environmental Protection (Clearing of Native vegetation) Regulations 2004.* This provision does not extend to other persons who wish to take protected flora from roadsides.

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

In issuing a licence, CALM is required to be assured that the activity will not compromise the conservation of the flora. In determining this, CALM will seek advice from the road manager to determine the potential impact of the activity, and how the activity relates to the management objectives being applied to that land.

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

### Commercial Wildflower Harvesting.

Western Australia is referred to as the 'Wildflower State', and its wildflowers attract a significant number of tourists each year. Roadside vegetation provides the most accessible, and hence the most commonly viewed, array of wildflowers, and as such are an important feature of regional tourism, potentially providing a significant financial boost to local economies. Wildflower harvesting in many instances detracts from the biodiversity and tourism values of the roadside and should therefore be discouraged.

The RCC considers that the flora on roadsides is reserved and maintained for public benefit. It is therefore seen as a contradiction of purpose to allow wildflowers on roadsides to be harvested, particularly for private gain, and this activity should not be permitted. However, there are situations where some harvesting may be considered, such as in very wide road reserves where the activity can be screened from road users and has a smaller impact on biodiversity. It is often the case that flora is harvested from roadsides because of the convenience of access, and harvesters should be directed to find alternative locations. Road managers have been discouraged from supporting or allowing such harvesting to occur, but if harvesting is to be approved, then the points provided at the end of these guidelines should be considered.

### Seed Collection.

Throughout much of the south west, revegetation of the native flora is being undertaken to redress the problems that historic clearing has created. Increasingly, this revegetation is aimed at using local native flora so as to recreate the native vegetation to support biodiversity objectives. The paradox is that in many areas the native vegetation has been cleared to such an extent that adequate sources of native seed cannot be found for undertaking this work. Roadside vegetation may be one of few sources of such seed. Seed production is an important component of remnant vegetation. Some species, called re-seeder species, regrow only from seed when plants are either killed by an event, such as fire, storm damage, or die as part of their natural cycle. The maintenance of adequate seed of these species is necessary as a precaution to ensure the continuity of the flora biodiversity.

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

When seed is needed for *bona fide* revegetation projects within the local community, and no other source of local seed is available, then the managing authority may consider giving permission for collection of seed from roadsides. Such collection must be under the appropriate licence issued by CALM and the harvesting should be done in a way that does not endanger the long-term survival of the roadside vegetation.

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

### Timber Harvesting from Roadsides.

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

Roadside managers are encouraged to retain timber on roadsides as an important component of the natural habitat, which fulfils ecological, aesthetic and land management functions. Fallen logs and branches within the roadside create important habitat for many species of insects, reptiles, mammals and birds, thus enhancing the roadside biodiversity. Insects and reptiles that live in fallen timber are also important elements of the food chain, and are very important to the functioning of natural systems, and the survival of many other native animals.

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

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

### Guidelines For Harvesting On Roadsides.

• In all cases the permission of the managing authority, i.e. Main Roads WA, Local Government or CALM, must be sought before native flora is removed from a roadside.

- Flora removal should be from only designated roads, which have wider vegetated road verges i.e. vegetation width > 3metres.
- The number of operators authorised to remove flora from a roadside should be strictly limited to that which can be sustained and managed. The determination of this is at the judgement of the managing authority, but consideration should be taken of the type of flora being harvested and an evaluation of monitoring of the impact of the harvest activity. Advice may be sought from CALM or the RCC.
- Approval for flora harvesting should be for a set period, with a review of the impact and operation before renewal.
- Approval should also stipulate approved methods of harvesting, the species which may be harvested, and the quantity of material to be taken. Advice on harvest conditions may be obtained from CALM.
- Any flora removed should not affect the viability of the residual seed bank. It is recommended that no more than 20% of the flowers or seed on a plant should be taken, unless it is in an area that is scheduled to be cleared as part of road management.
- Methods of harvesting flora should not jeopardise the survival of the plant/tree, unless it is in an area that is scheduled to be cleared as part of road management.
- The removal of whole plants should be restricted to areas that are scheduled to be cleared as part of road management. Note, some species of flora such as zamia palms and grass trees cannot be removed for commercial purposes without a special endorsement on the Commercial Purposes Licence issued by CALM.
- No flora of special conservation concern (Declared Rare Flora or Priority Flora) should be removed without special authorisation through CALM.
- No commercial harvesting of any plant product should be allowed for any reason between the markers that delineate a Environmentally Sensitive Areas defined in the *Environmental Protection (Clearing of Native vegetation) Regulations 2004*.
- Flora harvesting should be prohibited from designated Flora Roads.
- Care should be taken that access to Dieback infected areas is limited to the drier months of the year, and vehicular access disallowed.
- Safety should always be of prime concern and every effort should be made to ensure that personal safety is a key consideration in any harvesting operation.
- Flora harvesters should not operate from the roadside in areas where the vegetation is close to the road, where vehicles cannot be safely parked off the road, or where there is poor driver visibility.

### Appendix

### 7



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

### Introduction

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



travellers as areas worthy of an inspection to view the local flora.

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

### **Principle Conservation Values of Flora Roads:**

- The roadside must contain a significant population of native vegetation. Introduced trees and grasses are not important for conservation.
- The native vegetation must be in as near to its natural condition as possible. In undisturbed vegetation, several layers of plants occur - trees, shrubs and herbs are present in woodlands, for example. If one or more of the expected layers are missing, the conservation value is reduced.
- The roadside may be the only remaining example of original vegetation within a cleared area. It thus:
- assists in vegetation mapping and distribution studies;

- provides a benchmark for study of soil change during agricultural development;

- provides a source of local seed for revegetation projects;
- acts as a wildlife habitat for the protection of fauna;
- harbours rare or endangered plants in the roadside;
- may provide nest sites and refuges for native animals; and
- may act as a biological corridor.

### Identification and Nomination of Flora Roads

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

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

A road may be nominated as a Flora Road by submitting a written request to the RCC. The RCC requires the following information:

- endorsement from the managing authority;
- name of the road, Local Government Authority, and the road manager (MRWA, Local Government or CALM);
- · distance of the proposed Flora Road; and
- width of the road reserve.

The following information would also be useful:

- photograph(s) of the road;
- a list of the dominant plant species; and
- threats such as weeds, disturbances, etc.

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

### Establishment of a Flora Road

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

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

### **Management Implications**

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

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

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

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

council may choose to adopt a policy on Roadside Conservation;

- environmental assessments (pre-construction checklists) should be completed prior to any upgrade work, to assist with planning for flora preservation;
- fire management should be undertaken in such a way so as to take into account the ecological needs of the flora; and
- where rehabilitation is contemplated, local native species should always be used.

### Tourism Implications

Declared Flora Roads will, by their very nature, be attractive to tourists, and would

often be suitable as part of a tourist drive network. Consideration should be given to:

- promoting the road by means of a small brochure or booklet;
- eventually showing all Flora Roads on a map of the region or State;
- using specially designed signs to delineate the Flora Road section; and
- constructing roadside flora rest areas where people can get out and enjoy the flora. Walk trails could be made from these, and information brochures produced. The RCC has established links with the W.A.Tourism Commission for inclusion on wildflower tourist publications.

### Flora Road Register

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

In order to plan roadworks so that these important areas of roadside vegetation are

not disturbed, road managers should also know of these areas. Therefore, it is suggested that the Managing Authority establishes a *Register of Roads Important for Conservation* also. This register should be consulted prior to any works being initiated in the area.