



Roadside Management Strategy

June 2006



Yarriambiack Shire Council Roadside Management Strategy

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This publication is intended to be of assistance to all people involved in management of roadsides in the Shire as defined in this document, but the Yarriambiack Shire Council, the consultants and the Roadside Management Strategy Steering Committee do not guarantee that this document is without flaw of any kind or that it is wholly appropriate for the particular purposes of individuals, and therefore disclaim any liability for any error, loss or other consequence that may arise from reliance on information in this publication.

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Thanks also go to the Roadside Management Strategy Steering Committee members:

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CONTENTS

Acknowledgments.....	i
How to Use this Strategy.....	iii
Abbreviations.....	iii
1.0 Introduction.....	1
1.1 Purpose of this Strategy.....	1
1.2 Background.....	1
1.3 Boundaries and Native Vegetation of the Yarriambiack Shire.....	2
1.4 Management Objectives.....	3
1.5 Strategy Implementation, Monitoring and Evaluation.....	3
1.6 Priority Actions.....	4
2.0 Legislative and Planning Context.....	5
3.0 Legislative and Planning Requirements.....	8
3.1 Native Vegetation Removal.....	8
3.2 Offsets.....	8
3.3 Sections and Overlays to the Yarriambiack Planning Scheme.....	9
3.4 Specific Legislative and Planning Issues.....	9
4.0 Managing Native Vegetation on Roadsides.....	13
4.1 Overview.....	13
4.2 Threatening Processes to Roadside Native Vegetation.....	13
4.3 Principles and Priorities for Native Vegetation Management.....	14
4.4 Conservation Value and Significance of Native Vegetation on Roadsides.....	15
4.5 Managing Native Fauna and Wildlife Habitat.....	16
4.6 Rare, Threatened or Significant Flora and Fauna.....	16
4.7 Large and Medium Old Remnant Trees.....	17
4.8 Understorey Vegetation.....	18
5.0 Functional Issues.....	19
5.1 Road Safety.....	19
5.2 Road Design.....	19
5.3 Road Construction, Widening and Maintenance.....	19
5.4 Utility Services.....	20
5.5 Rest Areas.....	20
6.0 Pest Animals and Plants.....	21
6.1 Pest Animals.....	21
6.2 Pest Plants.....	22
7.0 Cultural Heritage.....	23
8.0 Education and Awareness.....	24
Glossary.....	26
Appendix 1 Results of Consultation at Public meetings and with Key Stakeholders.....	28
Appendix 2 Significant Fauna and Flora in Yarriambiack Shire Council.....	31
Appendix 3 Key Weed Species in Yarriambiack Shire Council.....	35
Appendix 4 Checklist for Tree Planting and Revegetation on roadsides.....	36
Appendix 5 Roadside Conservation Status Map.....	37

How to use this strategy

The Yarriambiack Roadside Management Strategy comprises three documents, this strategy, the Community Handbook and the Environmental Code of Practice Handbook.

This document provides the overall policy framework relating to roadside vegetation management, along with the legislative context and recommendations for future management.

The handbooks provide specific user groups with objectives and guidelines applicable to their activities. These handbooks have been developed for:

- Road maintenance and construction workers and service providers.
- Community members, Landholders, Landcare groups and fire prevention agencies.

Abbreviations

CFA	Country Fire Authority
CMA	Catchment Management Authority
DSE	Department of Sustainability and Environment
DPI	Department of Primary Industries
EPBC	Environment Protection and Biodiversity Conservation Act
EVC	Ecological Vegetation Class
FFG	Flora and Fauna Guarantee Act
LL	Local Law
MAV	Municipal Association of Victoria
MFPC	Municipal Fire Prevention Committee
MFPO	Municipal Fire Prevention Officer
MFPP	Municipal Fire Prevention Plan
RCAC	Roadside Conservation Advisory Committee
RMS	Roadside Management Strategy
VEP	Vegetation Enhancement Project
VFF	Victorian Farmers Federation
VPP's	Victorian Planning Provisions

1.0 Introduction

1.1 Purpose of this Strategy

Road reserves were established to provide a safe and effective road network for vehicle movement. Over time the role of road reserves has expanded to provide for stock movement, access for utility services and fire management.

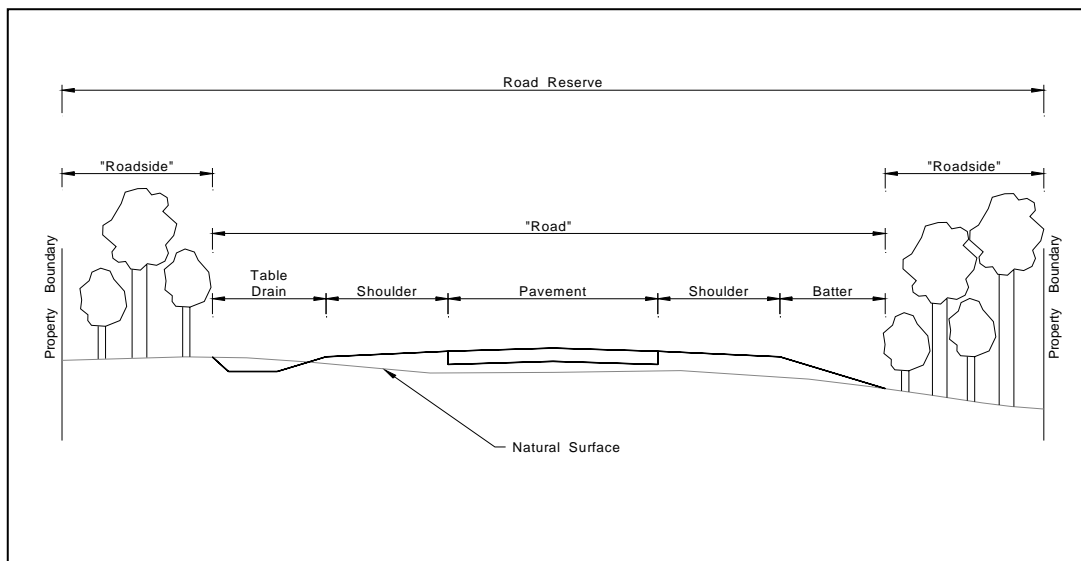
More recently roadsides have been recognised as being very valuable for the conservation of native plants and animals. Roadsides also provide amenity value for both the local community and tourists who visit the area, and contain sites of cultural heritage.

The purpose of this strategy is to protect and enhance these environmental, amenity and cultural values, while maintaining the functional amenity of the road. This is to be achieved by developing integrated and sustainable management guidelines aimed at reversing the trend of biodiversity decline in the Shire.

Roadsides contain substantial areas of Crown Land with shared management responsibilities. Roadside management strategies have been developed across Victoria to address the unique issues confronting the conservation and management of roadside vegetation.

The development of this strategy has been undertaken under the direction of Yarriambiack Shire Council, with support from the Wimmera CMA. The scope of this strategy is the management of rural roadsides under the control of Yarriambiack Shire Council, specifically excluding roads controlled by Vicroads. Within the Shire a total of 4,860 km of road reserves covers a diversity of land systems and native vegetation types.

The diagram below defines the various sections of the road reserve, including the 'roadside' section that this strategy covers.



Community consultation has been undertaken throughout the development of this strategy. This consultation has highlighted the competing demands between the functional and environmental values of road reserves.

1.2 Background to the Strategy

There have been many dramatic changes to the Australian landscape since European settlement. Much of the landscape has been cleared to provide agricultural and habitable land. Remaining areas of native vegetation have become fragmented and isolated, resulting in significant impacts on native plants and animals. Clearing of native vegetation has also resulted in widespread land degradation, including topsoil loss, rising watertables, salinity and algal blooms in waterways.

As a reflection of this, the Victorian State Government has adopted the *Victoria's Native Vegetation Management – A Framework for Action* (referred to in the remainder of this Strategy as the 'Native Vegetation Framework') which establishes the primary goal for management of native vegetation as: 'A reversal, across the entire landscape, of the long-term decline in the extent and quality of native vegetation, leading to a Net Gain.'

The Shire contains some larger areas of public land containing native vegetation, mostly on non-arable land. However, specific native vegetation types that occurred on the more fertile soils have been extensively cleared, with only 2% of the original vegetation of these areas remaining. Roadsides now contain some of the last remnants of the vegetation that was originally widespread throughout the Shire. This vegetation acts as a network across that landscape, linking fragmented remnants, and providing habitat and wildlife corridors for native animals.

The Wimmera CMA draft Native Vegetation Plan recognises roadside areas as providing '...some of the last remaining areas of significant remnant native vegetation, and many plant species are found only on roadsides'. The Yarriambiack Shire Council's Municipal Strategic Statement has identified the need to 'Protect and enhance indigenous roadside vegetation through effective management of road reserves...' as a means of improving biodiversity within the Shire.

1.3 Boundaries and Native Vegetation of the Yarriambiack Shire



The Yarriambiack Shire Council covers 7,158 square kilometres, and incorporates parts of the Wimmera, Murray Mallee and Lowan Mallee bioregions. The shire is located in the catchments of the Wimmera, Avon and Richardson Rivers. The Yarriambiack Creek is also an important catchment in the Shire. Also contained within the Shire is the Wyperfeld National Park.

Prior to European settlement a diverse range of native vegetation types existed across the Shire. The Wimmera plains in southern areas of the Shire supported open woodlands and savannah dominated by Buloke, often growing in association with Yellow Gum, Black Box, Grey Box and Cypress Pine. The understorey was often diverse with shrubs, wildflowers and native grasses present. Interspersed within these woodland areas were grassy openings ranging from a few to many hundreds of hectares. In areas prone to waterlogging, Black Box woodlands with a Tangled Lignum understorey were dominant. Larger areas of treeless grasslands probably occurred on the heavy clay pans around Rupanyup.

These woodlands and grassy areas have been extensively cleared and most remnants now only remain on three and five chain road reserves.

The central areas of the Shire mostly supported the open woodlands described above, interspersed with various types of Mallee woodland. The understorey in many of these Mallee woodlands was dominated by various Saltbush's and Bluebush's (Chenopods). Much of this area was extensively cleared for cereal cropping. Northern areas of the Shire predominantly supported various types of Mallee vegetation.

Many different Ecological Vegetation Classes (EVCs) have been mapped within in the Shire. EVCs are distinct vegetation types that vary depending on geology, soil type, aspect, rainfall, altitude and position in the landscape. They are classified according to structure, habitat and ecological characteristics. Many of the EVCs within the Shire are listed as being endangered, vulnerable, rare or depleted. Information on EVCs in the region can be found in the draft Native Vegetation Plans or on the DSE web site (www.dse.vic.gov.au).

1.4 Management Objectives of the Strategy

This strategy relates to the management of Yarriambiack rural roadsides and complements existing strategies that relate to land management. Under the Local Government Act 1989, Council's role in managing roads is to:

- Provide safe transport corridors.
- Ensure safe property access.
- Minimize fire risk.
- Protect and enhance biodiversity values.
- Protect cultural, heritage and amenity values.

Within the above context, the primary objectives of this strategy are to:

- Protect and enhance biodiversity values.
- Protect and enhance cultural, heritage, amenity values and community assets.
- Enhance community awareness of roadside issues and this strategy.
- Build partnerships and enhance the skills and knowledge of key stakeholders and the community.
- Improve roadside works practices, promoting minimum disturbance techniques.
- Reduce maintenance costs through improved roadside management.
- Enhance water quality.
- Minimize pest plant and animal invasion and spread.
- Minimize land degradation.
- Develop sustainable management guidelines within the context of other state and regional strategies.

However, it is recognized that the primary function of roads is to provide safe passage of vehicles, and any other policies, strategies and standards for road design, construction and maintenance, whether developed by the Shire or other organisations with that responsibility, shall take precedence over this strategy.

1.5 Strategy Implementation, Monitoring and Evaluation

This strategy, having been adopted as Council policy, sets achievable objectives and provides best practice guidelines for management at planning, community and operational levels. These require implementation to ensure on-ground improvements occur in line with the Native Vegetation Framework and the Municipal Strategic Statement.

Successful implementation of this strategy depends upon community capacity building and the development of partnerships in an integrated regional approach. This includes integration of fire prevention and Landcare activities, improvements in roadworks practices and education of the community. The strategy also provides guidance to adjoining landholders and service organisations as to what is acceptable practice on roadsides.

A review of the implementation of priority actions outlined in this strategy (see Section 1.6) should be carried out 18 months after the strategy being adopted by Council, which is early 2008. The strategy should be reviewed again three years after adoption by Council (mid 2009). These reviews should be undertaken by the Roadside Management Strategy Steering Committee, in consultation with the Council and Council officers. The reviews should include an external audit of on-ground performance, to gauge improvements in roadside works practices and the level of compliance with the guidelines outlined in the strategy.

1.6 Priority Actions

Number	Actions	Responsible Agency	Timeline	Key Performance Indicator
1	Incorporate this Strategy into the Yarriambiack Planning Scheme as a reference document.	Council	2006	Strategy adopted as reference document
2	Review Local Laws relating to roadside grazing and droving. Develop Local Laws to regulate ploughing, spraying, cropping, firewood collection and other activities that have a significant impact on roadsides. Any Local Law developed should reflect this strategy and the conservation status of roadsides as mapped by the CMA.	Council	2006	Local laws reviewed and new laws adopted
3	Issue written agreements to confirm existing cropping.	Council	2006	Agreements issued
4	Obtain DSE approval for maintenance clearance template for branch trimming associated with canopy clearance.	Council	2006	Template approved
5	Develop a Municipal Firewood Strategy in conjunction with DSE to assess the feasibility of establishing private, community or commercial woodlots.	Council/ DSE	2007/08	Firewood Strategy adopted
6	Incorporate minimum operating guidelines as detailed in this strategy into road work specifications and tender documents.	Council and Service Providers	2006& Ongoing	Number of contracts with guidelines incorporated
7	Clarify and communicate to applicants the role and responsibilities of Council and DSE for administration of planning controls over native vegetation removal.	Council/ DSE	Ongoing	
8	Review the existing roadside conservation maps and incorporate EVC conservation significance (Sec.4.4)	Council/ CMA	2006	EVC ratings incorporated
9	Review the existing Environmental Significance Overlays and develop ESO's as required	Council/ CMA	2007	ESOs incorporated in Planning Scheme
10	Develop Vegetation Protection Overlays for high conservation roadsides and for biolinks.	Council/ CMA	2007	VPOs incorporated in Planning Scheme
11	Provide training to councillors, council staff, contractors, and key stakeholders undertaking activities along roadsides, in values and identification of indigenous plants and weed identification and control.	Council	2006/07/ 08	Number of people attending training courses
12	Distribute this strategy and handbooks to relevant individuals and organisations.	Council	2006	Number of copies distributed
13	Review the extent and effectiveness of the existing MFPP firebreak network. This review to consider the conservation significance of native vegetation, locations of threatened flora and fauna, alternative locations, alternative fuel reduction measures (eg strategic grazing or haymaking), weeds and CFA Roadside Management guidelines.	MFPO/ MFPC/CFA	2006/07/ 08	Review completed
14	Monitor the implementation of this strategy and conduct external audits of works practices to monitor on-ground improvements. Ensure that Council staff, contractors, utility providers and Landcare groups are following guidelines outlined in this strategy.	Steering Committee/ Council	2008	Implementation monitored, audits undertaken and guidelines being followed
15	Council policy documents should be consistent and give appropriate consideration to roadside vegetation.	Council	Ongoing	
16	Adopt policy on suitable setbacks for roadside planting.	Council	2006	Policy adopted
17	Clarify minimum extent for fencing vegetation removal	Council	2006	Distance set
18	Undertake field days for landowners regarding legal obligations, plant identification and appropriate management activities. Educate landowners to the negative effects and limited benefits of spraying.	DSE/ DPI/Council and Landcare	Ongoing	Number of field days held and community numbers attending
19	Consult with key stakeholders and the community regarding pest plant and animal management along roadsides.	DPI/DSE and Landcare	Ongoing	
20	Council should adopt a policy on appropriate strategic locations for revegetation or native vegetation enhancement, including offsets on other land tenures.	Council	2007	Policy adopted
21	Install and monitor signage	Council	2007	Signage installed
22	Work with Landcare Groups and Yarriambiack VEP to identify potential roadsides for biolinks, source funding and establish biolinks on roadsides. Use biolinks for Native Vegetation Framework offsets where appropriate.	Council/ CMA/DSE/ Landcare/VEP	Ongoing	Kilometres of biolinks established
23	Review this strategy.	Council	2009	Review completed

2.0 Legislative and Planning Context

A range of Commonwealth and State legislation, policies, strategies and frameworks impact on roadside management.

Act, Strategy or Policy	Implications for Roadside Management
National	
Aboriginal and Torres Strait Islander Heritage Protection Act 1984	Provides for protection of indigenous cultural heritage sites.
Native Title Act 1993	Cultural heritage management rights are commonly claimed as part of the native title process, thus traditional owner groups and native title claimants need to be represented in indigenous cultural heritage processes.
Australian Heritage Council Act 2003	The Australian Heritage Council maintains the Register of the National Estate, and advises the Minister for the Environment on cultural heritage matters.
Environment Protection and Biodiversity Conservation Act 1999	Actions that are likely to have a significant impact on matters of national environmental significance are subject to a rigorous assessment and approval process. Matters of national significance include World Heritage areas and listed threatened species and ecological communities. This Act also protects nationally significant cultural heritage sites.
Telecommunications Act 1997	Provides for inspection, installation and maintenance of telecommunication facilities. Outlines telecommunication service provider's responsibilities in relation to environmental impact statements and other environmental issues.
State	
Legal Authority	
Local Government Act 1989	Delegates authority for managing undeclared roads to local government. Authorises local councils to create certain Local Laws in relation to roadsides.
Flora and Fauna	
Forests Act 1958	Delegates authority for managing vegetation on roadsides to local government. Allocates ownership rights over vegetation on roadsides to the Crown.
Conservation, Forests and Land Act 1987	Prior to any works being undertaken that may disturb 'critical habitat' (defined under the Flora and Fauna Guarantee Act) a plan must be submitted to the Department of Sustainability and Environment.
Planning and Environment Act 1987	Delegates to local government responsibility for the control of land use and planning within their Shire. The Act also introduced a permit requirement to remove native vegetation, administered mainly by local government. Also allows for statutory planning scheme protection of both indigenous and non-indigenous cultural heritage sites by application of Heritage Overlay controls.
Flora and Fauna Guarantee Act 1988	The primary legislation for biodiversity conservation in Victoria. The aim of the legislation is to ensure that Victoria's native flora and fauna survive, flourish and retain their potential for evolutionary development in the wild. The Act requires all public authorities, including local government, to consider indigenous flora and fauna conservation in decision-making and management activities.
State Conservation Strategy 1987	Recognises the importance of indigenous vegetation along roadsides and commits governments and government authorities to produce roadside management plans.
Victorian Biodiversity Strategy 1997	Provides the overall strategic direction to protect and enhance biodiversity across Victoria.
Victoria's Native Vegetation Management – A Framework for Action 2002	Outlines strategic direction for management of native vegetation in Victoria. Establishes the primary goals and principles for native vegetation management. Also establishes a quality/quantity measure (habitat hectares) to quantifying any compensatory actions required to offset the removal of native vegetation.

Act, Strategy or Policy	Implications for Roadside Management
<p>Cultural Heritage</p> <p>Archaeological and Aboriginal Relics Preservation Act 1972</p> <p>Heritage Act 1995</p> <p>Coroners Act 1985</p>	<p>Provides for protection of Archaeological and Aboriginal Relics and sites on roadsides.</p> <p>Protects all non-indigenous heritage sites and is administered by Heritage Victoria. It is an offence to disturb or destroy a place or object on the Heritage Register or Inventory without a permit.</p> <p>Requires the discovery of any suspected unidentified human remains, including indigenous burials, to be immediately reported to the police or Coroners Office.</p>
<p>Pest Management</p> <p>Catchment and Land Protection Act 1994</p>	<p>Outlines responsibilities and landholders duty of care for control of Pest Animals and Regionally Controlled Weeds on roadsides. Offences include spread of declared weeds by vehicles.</p>
<p>Chemical Use</p> <p>Agricultural and Veterinary Chemicals Act 1992</p>	<p>Regulates spray drift, licences, agricultural chemical users permits, chemical registration requirements and chemical control areas. A Code of Good Practice for Farm Chemical Spray Application has also been produced.</p>
<p>Fire Prevention</p> <p>Country Fire Authority Act 1958</p>	<p>Councils are responsible for managing roadsides to reduce threats to life and property from fire. Any fire prevention works must, however, have due regard to indigenous vegetation values. The document <i>Roadside Fire Management Guidelines</i> has been produced to assist in the above.</p>
<p>Timber and Firewood</p> <p>Forests Act 1958</p> <p>Land Act 1958</p>	<p>Regulates cutting and removal of timber from roadsides.</p> <p>Provides for prosecution for illegal removal of timber from roadsides</p>
<p>Pollution</p> <p>Environment Protection Act 1970</p>	<p>Outlines control of dust and polluted runoff from roads</p>
<p>Extractive Industries</p> <p>Mineral Resources Development Act 1990</p>	<p>Regulates the extraction of stone, gravel, sand etc from public land. Some exemptions relate to roadworks.</p>
<p>Littering</p> <p>Litter Act 1958</p>	<p>Makes littering of roadsides an offence.</p>
<p>Stock Grazing and Movement</p> <p>Road Safety Regulations 1997</p> <p>Summary Offences Act 1966</p>	<p>Establishes road rules in relation to giving way to stock and sets standards of signage required for stock movement along roads.</p> <p>States that it is an 'offence to obstruct droving stock'.</p>
<p>Services/Utilities</p> <p>Servicing Acts</p> <p>Electrical Safety Act 1998</p> <p>Code of Practice for Powerline Clearance (Vegetation) 1996</p>	<p>Permits utilities the authority to locate and access assets on roadsides.</p> <p>Regulates the clearance of vegetation in relation to electricity supply.</p> <p>Details prescribed clearances for vegetation.</p>
<p>Transport</p> <p>Transport Act 1983</p> <p>Road Management Act 2004</p>	<p>Makes Vicroads responsible for the management of declared roads.</p> <p>Local government responsible for public roads on their road register. Code of Practice for managing utility infrastructure within road reserves.</p>

A further range of specific planning reference documentation relates to the Yarriambiack Shire area.

Yarriambiack Shire Council Road Management Plan (2004)
Yarriambiack Shire Council Planning Scheme
Yarriambiack Shire Council Municipal Strategic Statement (1999)
Yarriambiack Shire Council Municipal Fire Prevention Plan (2001)
Wimmera Regional Catchment Strategy (2003-2008)
Wimmera Roadside Management Strategy (2000)
Wimmera Regional Landcare Plan (1993)
Wimmera Regional Salinity Action Plan (2005)
Wimmera Catchment Management Authority draft Native Vegetation Plan (2004)
Wimmera Weed Action Plan (2000-2005)
Mallee Regional Catchment Strategy (2003-2008)
Mallee Roadside Management Strategy (1998)
Mallee Regional Landcare Plan (1993)
Mallee Catchment Management Authority draft Native Vegetation Plan (2005)
Mallee Weed Action Plan (2001-2005)

In addition to these planning reference documents, authorities must also have regard to relevant aspects of:

- Action Statements and management plans prepared under the Flora and Fauna Guarantee Act 1988.
- Any special area plans approved under the Catchment and Land Protection Act 1994.
- The Environment Protection and Biodiversity Conservation Act 1999 which requires a permit from Environment Australia for any work on roadsides that impacts on threatened flora and fauna.

3.0 Legislative and Planning Requirements

3.1 Native Vegetation Removal

Councils have control of clearance of native vegetation on road reserves under the Forest Act 1958 and the Planning and Environment Act 1987 and General Provisions (Clause 65.01) Victorian Planning Provisions 1996.

A planning permit is required to destroy, remove or lop native vegetation on roadsides (subject to a range of exemptions) under the State Section of Planning Schemes (1989) and VPP's Cl. 52.17 Native Vegetation, Particular Provisions.

Unless it is an emergency all applications relating to roadsides must be referred to DSE (Clause 66.02 of VPP's). Any conditions imposed by DSE must be included on a planning permit. Where DSE objects to the granting of that permit, Councils must refuse to grant a permit. Permits are not required where Council determines that the exemptions apply.

The Native Vegetation Framework establishes the primary goal for native vegetation in Victoria as:

'A reversal, across the entire landscape, of the long-term decline in the extent and quality of native vegetation leading to a Net Gain. Net Gain is the outcome for native vegetation and habitat where overall gains are greater than overall losses and where individual losses are avoided where possible.'

Planning and responsible authorities must consider the Native Vegetation Framework and any operational guidelines in permit applications. The Native Vegetation Framework does not trigger additional permit applications, but introduces a more detailed assessment process for applications involving clearing.

A three-step approach is taken to apply Net Gain:

1. **Avoid** the clearing of native vegetation.
2. **Minimize** the impacts where clearing of native vegetation cannot be avoided.
3. **Offset** any clearing of native vegetation with appropriate gains.

3.2 Offsets

The nature and extent of offsets will depend on the quantity, quality and conservation significance of the vegetation to be removed. Where vegetation is classified as having very high conservation significance, clearing is not permitted unless exceptional circumstances apply. The Native Vegetation Framework also details requirements to account for remnant individual or scattered tree loss.

Offsets must be of an on-going and secure nature, and be maintained once achieved. Once land has been used for purpose of providing an offset, it is intended that it will be protected from any future use or development.

In relation to clearing on roadsides, options for offsets may include:

- Active improvement of existing native vegetation on another section of road reserve or other land controlled by the Council. For example, by controlling high threat woody weeds or pest animals beyond existing legal duty. Supplementary understorey plantings or ecological burning may also be used on a case by case basis.
- Revegetation of previously cleared areas or recruitment of new trees, including plantings undertaken since June 1989 (subject to meeting certain requirements). The extent that revegetation can be used as an offset will depend on conservation significance of the vegetation being cleared.

Offsets should be proposed in sufficient detail prior to submitting a planning permit. A clear link between gains and losses must be achieved. Offsets are usually to be undertaken using indigenous vegetation in the same vegetation type, bioregion and quality (i.e. meet 'like-for-like' criteria), but more flexible arrangements exist for clearing of vegetation of lower conservation significance. Advice from DSE must be sought in relation to offsets for roadsides.

Generally offsets must be on same type of land tenure, however this can be varied in some circumstances. For example, offsets could be located on private land adjacent to roadsides for vegetation clearance on roadsides, or on public land such as unused road reserves for clearance on private land.

3.3 Sections and Overlays to the Yarriambiack Planning Scheme

Various sections of the Yarriambiack Planning Scheme are relevant to roadside management. Section 21.08-3 identifies roadsides as having high environmental value and promotes the protection and enhancement of these areas through effective management. Section 21.08-04 identifies Action Statements prepared under the FFG Act that must be taken into account by responsible authorities. Section 22.03-4 states that in considering any planning permit application, the Council must identify, protect and enhance Victorian Rare and Threatened flora and fauna species.

Overlays are described at Clauses 42-44 of the VPP. Overlays place additional permit requirements to remove, destroy or lop native vegetation on roadsides within the Shire. Some activities that are currently exempt under VPP's Clause 52.17 may not be exempt in areas where these Overlays apply. Currently the Yarriambiack Planning Scheme has no Vegetation Protection Overlays or Environmental Significance Overlays relating to specific roadside issues.

It is recommended that:

- a VPO be incorporated into the Yarriambiack planning scheme to protect native vegetation on
- high conservation roadsides.
- a VPO be incorporated into the Yarriambiack planning scheme to protect biolinks when these are established in appropriate strategic locations.
- ESOs be incorporated into the Yarriambiack planning scheme to protect areas where rare and endangered species occur on roadsides eg Bush Stone-curlew, Grey-crowned Babbler, White-bellied Sea-Eagle, Hairy Pod Wattle (*Acacia glandulicarpa*), Turnip Copperburr (*Sclerobeana napiformis*).

3.4 Specific Legislative and Planning Issues

It is Council's role to implement specific actions under the planning scheme for a range of diverse activities conducted on road reserves. The requirements for these activities are provided below, together with recommendations for Council.

Fire Management

- It is the Council's responsibility to *'take all practicable steps to prevent the occurrence of fires on, and minimize the danger of the spread of fires on, any road under its care and management'* under Section 43 CFA Act 1958.
- Only fire prevention works on roads undertaken in accordance with, and specified within the Municipal Fire Prevention Plan, are exempt from the requirement for a planning permit.
- Except for firebreaks listed in the MFPP, firebreaks are not to be constructed on roadsides.
- Sites of threatened or significant flora and fauna species should be protected by appropriate actions prior to any fire prevention works being undertaken.
- All fire prevention activities on roadsides will have regard to this strategy, CFA Guidelines and all other legislative requirements for the protection of biodiversity.

It is recommended that:

- the extent and effectiveness of the strategic firebreak network be reviewed, in relation to the conservation significance, CFA Roadside Management guidelines and the effectiveness of existing roadside firebreaks.

Land Subdivisions and Developments

- Refer to Vegetation Protection Overlays and Environmental Significance Overlays when developed.
- Provide relevant information to potential developers and real estate agents.
- Assess new subdivisions or developments according to the requirements of the Native Vegetation Framework, including the impact of new roads and effects on remnant vegetation on existing roadsides.
- Permits issued shall include the requirement that roadworks be undertaken in accordance with the guidelines outlined in the Environmental Code of Practice handbook, including action plans for noxious weeds if present.
- Permit applicants should:
 - Minimize the impact of new land subdivisions and developments by protecting and enhancing native vegetation and fauna on adjacent or nearby roadsides.
 - Consult with DSE to obtain information on flora and fauna on roadsides adjacent to subdivisions and on new roads within subdivisions, undertake site inspections and consider impacts.
 - Include buffer zones of planted indigenous vegetation between existing roadside native vegetation remnants and the subdivision.

Road Construction, Widening and Maintenance

- Under Clause 52.17 of VPP's a planning permit is required to:
 - Remove trees and shrubs over 10 years old that are growing within the existing road formation

- (ie. to the outer edges of the formed drain or batter).
- Perform road maintenance works that involve vegetation clearance in areas beyond the existing road formation or clearance template.
- Create new road sections including widening or straightening.
- Under Clause 52.17 of VPP's a planning permit is not required to:
 - Remove regrowth less than 10 years old that is growing within the existing road formation.
 - Lop branches that are growing within an approved clearance template.
 - Perform emergency activities such as clearing storm-damaged trees.
- Vegetation Protection and Environmental Significance Overlays, when developed, will place additional permit requirements for vegetation removal associated with road construction, widening and maintenance.
- Include relevant Minimum Operational Guidelines and the Environmental Code of Practice Handbook in tender specifications and contracts.

Service and Utility Provision

- A planning permit is required for service and utility providers to undertake new works.
- Maintenance of existing utility services is exempt, provided the removal of native vegetation is kept to the minimum extent necessary (CI 52.17 of VPP's).
- Permits may be required for routine maintenance that impact on native vegetation under the Vegetation Protection and Environmental Significance Overlays.
- A permit is required to remove, lop or destroy native vegetation outside powerline clearance zones.
- Maintenance within powerline clearance zones are exempt from requiring a permit to remove native vegetation providing electricity distribution companies or their contractors comply with the Code of Practice outlined in Section 65 of the State Electricity Distribution Act 1958. Under the Code of Practice distribution companies or their contractors are required to manage 'important vegetation' and tree canopy clearance.
- If noxious weeds may be spread by proposed activities, an action plan is required to address the risk.

Fencing

- Removal of native vegetation to the minimum extent required for fence construction, is exempt from the requirement of a planning permit (VPP's CI 52.17).
- In determining 'minimum extent', it is recommended that Council adopt a policy that the exemption from the need to obtain a planning permit for the removal of native vegetation shall be limited to the distances from the fence reasonably required to construct the fence. It is recommended that the maximum allowable distances that should be cleared are one metre on the road side of the fence and two metres on private property.
- Under Local Law No. 5 Clause 204 the owner or occupier of any land used for the keeping of livestock must ensure that fencing is adequate to prevent the likely escape of livestock onto adjoining roadsides

Ploughing

- Ploughing on roadsides, excluding MFPP sanctioned firebreaks, requires permission from the Council who is the prescribed Vegetation Manager under the Forests Act 1958.
- Where the destruction, removal or lopping of native vegetation will result from ploughing a planning permit will also be required under VPP's CI 52.17. Any infringements will require offsets to compensate for native vegetation destruction and removal.

Revegetation

Landcare activities are encouraged on roadsides where they contribute to protection and enhancement of biodiversity values. Research by CSIRO indicates that a minimum of 30 per cent of native vegetation cover is required within a region to avoid the loss of native plants and animals, reduce land degradation and maintain the productive capacity of the landscape. In many areas of the Shire, revegetation will be required on a very large scale if this amount of native vegetation cover is to be achieved.

- Permission is required before trees or any other plants can be planted on a roadside.
- Only indigenous plants (plants that naturally occur in an area and grown from seed collected in that area) should be used in roadside revegetation projects.
- Plans for any revegetation project, including biolinks, must be submitted to the Council at least two months prior to works.
- Plans must comply with this strategy and the *Yarriambiack Shire Council 'Road Management Plan'*, identify the location of all services and include adequate maintenance for a minimum of two years from planting.
- A checklist has been developed for groups planning revegetation activities on roadsides (Appendix 4).

It is recommended that:

- Landcare groups are encouraged to become involved in revegetation on roadsides.
- Landcare groups are encouraged to 'adopt' particular roadsides for ongoing involvement in management.
- Council adopt a policy that plantings should be setback 9 metres from the centreline of road, 10 metres from gates and 80 metres from intersections.

Stock Movement, Droving and Grazing

- Local Law No.5 Clause 206 regulates the movement of livestock from one property to another. Moving of stock does not require a permit, providing the stock is moved within a single day. Stock are only allowed on a road during daylight hours, must be supervised by a competent person and adequate warning must be given to drivers on that road. Stock movement is not allowed on sections of the road that are determined by the Council to have conservation value (LL No. 5 Clause 206 (b)).
- Local Law No.5 Clause 205 regulates the droving of livestock. Droving of stock requires a permit. In granting a permit the council must consider whether damage to sensitive plants or plants of conservation value is likely, LL5 Clause 205 (d).

It is recommended that the Local Law be revised to include:

- Reference to the roadside conservation values as mapped by the CMA.
- Preference is to be given to droving on Low Conservation Value roadsides, with droving being discouraged on higher conservation value roadsides.
- If there is no practicable route available other than a High Conservation Value roadside, animals must be driven at a pace that minimizes damage to vegetation.
- Droving will only be permitted when soils are not saturated or prone to compaction.
- Livestock must not be regularly moved unless areas of high conservation significance are avoided or protected.
- Limited grazing on Medium Conservation Value roadsides may be of ecological benefit or as part of the Municipal Fire Prevention Plan.

Slashing

- Slashing of native grasses requires a permit and consultation with DSE, except by authorised Council staff or contractors to improve traffic safety ie. at intersections to improve line of sight.
- Slashing of native grasses should not occur between November and January to allow native seed set, and blades on slashers should be set no lower than 150mm above the ground.

Cropping and Haymaking

- Several community groups undertake cropping on some roadsides within the Shire as a fund raising activity. Where it can be demonstrated that a significant community benefit arises from this activity, written agreements will be issued by Council to formalise these existing areas of cropping on roadsides. These agreements will need to clarify any legal liability issues associated with community groups conducting a Council endorsed activity on a roadside.
- As part of the agreement, it will need to be determined that a significant community benefit arises from the cropping activity. Cropping or haymaking on roadsides is to cease unless this benefit can be demonstrated. Significant community benefits include:
 - fire prevention activities
 - weed control
 - the raising of funds for local community groups
 - a strategic interim measure as part of a staged revegetation project
- Cropping is not to be extended outside agreed areas without a permit. Any new cropping will need to demonstrate a significant community benefit, and require an assessment of impacts on native vegetation.
- All existing and proposed areas of cropping are to be clearly identified and delineated using aerial or satellite photographs. The locations of trees and native vegetation adjacent to cropped areas are to be identified on the above maps to ensure tree removal or damage to native vegetation does not occur.
- Consent of adjoining landowners is to be obtained for existing areas of cropping and any new cropping proposals.
- A plan should be developed for suitable rehabilitation of the area upon cessation of cropping.
- Weed spread resulting from cropping activities must be avoided. Weed control must be undertaken throughout the year, including when cropping is temporarily ceased due to bad seasons or crop failure.
- Alternative income sources to existing crops should be considered. For example, the establishment of seed orchards of local native species for commercial sale. Environment groups could explore this option as means of rehabilitating degraded roadsides.

Unused Road Reserves

- Licences may be issued by DSE for use of unused road reserves subject to conditions that existing conservation values are maintained.
- Protect unused road reserves that contain native vegetation of high or medium conservation value from unnecessary development and disturbance.
- Examine other alternatives to proposed developments (eg new roads) on unused roadsides with high or medium conservation significance, including role as a biolink or wildlife corridor.

Pest Plant and Animals

- The CaLP Act 1994 outlines weed control responsibilities for all land. State Prohibited Weeds and Regionally Prohibited Weeds on roadsides under Council control are to be eradicated by DSE/DPI. Regionally Controlled Weeds and established pest animals on roadsides under Council control are to be prevented from

growth and spread by adjacent landowners. There are no legislative requirements for the control of environmental weeds.

- The removal of native vegetation to the minimum extent necessary to assist with the eradication of pest animal harbour is exempt from requiring a planning permit (Cl. 52.17, VPP's), however the work plan requires written approval from DSE.
- Removal of native vegetation associated with the eradication of noxious weeds requires a planning permit.

Wetlands and Waterways

- The Yarriambiack Planning Scheme contains an Environmental Significance Overlay (ESO1) for Watercourses, Waterbodies and Wetlands Protection Areas.
- CMA's have statutory responsibilities under the Water Act 1989 to monitor, manage, enforce and administer control over all works which may impact on a designated waterway.
- Designated waterways may be named or unnamed, permanent or seasonal and range in size from a river to a natural depression. Contact the relevant CMA to determine the location of designated waterways.
- A Works on Waterways permit should be obtained from the relevant CMA before undertaking any works within the bed and banks of designated waterways.
- Roadside drainage systems should ensure that water levels of wetlands are not altered, but restored if necessary.
- Ensure that runoff is not directed into wetlands. Road discharge should be filtered through native vegetation to reduce erosion and potential pollution problems.
- Wetlands and waterways are to be protected by appropriate works practices, including herbicide usage.

Sand, Soil and Gravel Extraction

- A permit is required from DSE for extraction of sand, soil and gravel from roadsides, for areas greater than 2000 square metres and depths greater than two metres.
- Councils are exempt if extractions are for road works, although any proposed Vegetation Protection Overlays and Environmental Significance Overlays would apply.
- Extractions must not be undertaken from sites infested with declared noxious weeds.
- Individuals are not permitted to extract sand, soil and gravel from roadsides.

Seed Collection

- Seed collection and removal of propagation material (eg cuttings) on roadsides requires planning approval under the Planning and Environment Act. Any possible adverse impacts should be assessed.
- Applications are referred to DSE (VPP's Clause 66.04 and 67.03).
- Planning approval must also include a permit issued by DSE under the Flora and Fauna Guarantee Act 1988. Commercial collection requires a license from DSE.
- Record sites for seed collection to ensure that over-collection of seed does not occur.
- Seed collection should be encouraged to ensure that adequate seed supplies are available for revegetation and offset planting purposes on appropriate roadsides...
- Large-scale seed collection should not be permitted, except where there is a demonstrated need for larger quantities of seed for direct seeding to revegetate appropriate roadside sites.

Firewood Collection

Firewood collection on roadsides requires a permit which is issued by Council acting as an agent for DSE. An estimated three per cent (15, 870 tonnes) of firewood in Victoria is collected from roadsides every year, mostly without a permit. As many traditional firewood supply areas become depleted, there will be increasing pressure on roadsides as a source of supply.

Dead standing trees, fallen timber and coarse woody debris are very important habitat for many native fauna, including mammals, birds, bats, reptiles and insects. Removal of this material simplifies the habitat value of remnant vegetation and can have serious impacts on biodiversity. Firewood collection is listed as threatening process to many vegetation types and has contributed to the threatened status of some species of flora and fauna.

It is recommended that:

Council in conjunction with DSE develop a Municipal Firewood Strategy which considers:

- ecological thinning of Crown Land areas
- establishing plantations on Council land for future firewood supply
- encouraging private farm forestry to ensure a future sustainable supply of firewood
- restricting firewood collection in areas covered by Vegetation Protection or Environmental Significance Overlays
- future firewood collection be restricted to storm damage on high conservation value roadsides and be minimized on medium conservation value roadsides.
- collection of fallen timber from low conservation roadsides

4.0 Managing Native Flora and Fauna on Roadsides

4.1 Overview

In the Native Vegetation Framework, the State Government has established Net Gain as the primary goal for native vegetation in Victoria.

At the regional level Catchment Management Authorities are developing Native Vegetation Plans to provide a clear strategic direction for management of native vegetation and achieve the goal of Net Gain (at present these Plans are at draft stage). The Yarriambiack Shire Council is located in the Wimmera and Mallee CMAs.

In relation to Native Vegetation Management on roadsides, Council's should:

- Administer planning processes, including enforcement of planning permit conditions.
- Provide special protection measures for native vegetation via overlays in the Planning Scheme.
- Assist the community with planning, coordination and management of native vegetation management.
- Provide staff and community education and training.
- Provide financial assistance through rate rebates or other funding sources.
- Coordinate delivery of State and Federal programs.
- Resource roadside vegetation mapping.
- Assist other agencies (such as DPI, DSE and CMAs) to improve management of roadside vegetation.

4.2 Threatening Processes to Roadside Native Vegetation

Threatening processes are actions or activities that threaten the survival or abundance of native vegetation and biodiversity. As remnant vegetation on roadsides tends to be narrow and linear, it is usually more susceptible to these processes. Identifying and addressing threatening processes is a key goal of managing native vegetation on roadsides. This will not only prevent further loss of habitat and biodiversity, but can also reduce maintenance costs, due to lower fuel loads, pest plant infestation and reduced soil erosion.

The main threatening processes to roadside vegetation include:

- Clearing and fragmentation of native vegetation
- Pest plants and animals and control activities
- Inadequate knowledge (land managers, community, government agencies) and lack of resources
- Firewood collection (due to loss of tree hollows and removal of wooden debris from the ground)
- Fire prevention activities eg ploughing, spraying and to a lesser extent, slashing
- Grazing, cropping and other agricultural activities
- Road construction and maintenance activities
- Altered water flows (hydrology)
- Loss and decline of large old trees
- Adjacent land use, including spray drift
- Service installation

An objective of this strategy is to address these threats in terms of the range of stakeholders undertaking these activities including adjoining landholders, community groups, service providers, CFA, Council staff and contractors.

4.3 Principles and Priorities for Native Vegetation Management

Retention and enhancement of native vegetation is the primary means of conserving biodiversity in the landscape. However, given the limited resources available and the depleted state of remnant vegetation it is necessary to prioritise management activities. The priorities for managing native vegetation management outlined at both a State and regional level are:

1. Retain and Protect Existing Remnants

Ensure that existing viable remnant vegetation is retained and protected.

2. Enhance Existing Remnants

Enhance existing remnants through activities such as weed control and supplementary plantings. Without such management most remnants, especially smaller remnants on roadsides, will deteriorate.

3. Connect Existing Remnants

Link existing remnants by planting wildlife corridors or biolinks.

Within the above, specific priorities will be determined by the conservation significance of each patch of remnant vegetation based on the conservation status of the vegetation (EVC), the quality and size of the vegetation and the presence of significant flora and fauna species. However, these factors will not always be sole determinant of action, as community perception and the capacity to undertake actions, will also determine priorities.

Any offsets undertaken by the Shire for unavoidable clearing of native vegetation should reflect the above priorities and principals, and be undertaken at a strategic landscape level.

A partnership approach with the community is required to ensure a long-term improvement in biodiversity within the landscape. Members of the community, either individually or through Landcare Groups, are encouraged to become involved in protecting and enhancing remnant vegetation on roadsides, and in the establishment of biolinks. More detailed information is included in the Community Handbook.

Biolinks or Wildlife Corridors

The existing network of roadside and streamside vegetation plays a critical role in maintaining corridors for wildlife. These networks can be enhanced by the strategic establishment of biolinks. Important components of biolinks are:

- the corridor be continuous and link larger patches of native vegetation, such as flora reserves, State Forest, National Parks or streamside reserves
- corridors provide diverse natural vegetation expected to occur on that site, including trees, shrubs and groundcover, including fallen logs and leaf litter.
- Be wide enough, and have suitable habitat for animals to live as well as move through




Options for corridors include private land, waterways, unused road reserves and roadsides. The most appropriate locations for biolinks are best considered at a landscape level using aerial or satellite photographs. The model for biolinks developed under the Yarriambiack Vegetation Enhancement Project in their Biolink Corridor Management Plan could form the basis for such projects. Biolink projects should be developed in conjunction with local Landcare Groups, including applying for appropriate grants. Offsets for clearing of native vegetation can also be used to enhance biolinks.

Research shows that corridors 40 metres or greater are best for wildlife movement. Therefore wide roadsides will be most suitable, especially where landowners can be encouraged to undertake revegetation on adjacent private land. Any roadsides used for biolinks should also have low traffic volumes to reduce the likelihood of road kill of native fauna.



4.4 Conservation Value and Significance of Native Vegetation on Roadsides

All roadsides in the Shire have been assessed (by a modification of the RCAC method) to determine the quality of native vegetation present. The CMA has prepared maps of these conservation values according to the ratings outlined in the table below. The conservation value should be validated for specific projects or works, as changes may have occurred since the assessments were undertaken.

Category	General Description	Example
<p>High Conservation Value</p>	<p>Relatively undisturbed native vegetation with all expected vegetation layers present and minimal weed invasion (less than 10%). Threatened species will be automatically included in this category.</p>	
<p>Medium Conservation Value</p>	<p>Moderately disturbed areas of native vegetation with one or more vegetation layers absent and moderate weed invasion. Also includes native vegetation that forms part of a wildlife corridor or is linked to larger native vegetation remnants.</p>	
<p>Low Conservation Value</p>	<p>Areas with no native vegetation or highly disturbed native vegetation with low species diversity and high levels of weed invasion. Also includes scattered or small clumps of indigenous trees and shrubs over a non-native understorey.</p>	

A more sophisticated method of assessing the conservation value of native vegetation has recently been developed under the Native Vegetation Framework, to determine offset requirements for individual vegetation clearance planning permit applications. This method is based on both the quality and extent of the vegetation. This method is too complex for use in assessing the entire road network, however it is recommended that the EVC conservation significance be incorporated with the existing conservation value maps of roadsides (the existing maps should be reviewed at the same time for accuracy and internal consistency). This combined rating would form the basis of a Vegetation Protection Overlay for roads within the Shire, thereby incorporating the concepts of both quality of vegetation and its relative rarity.

4.5 Managing Native Fauna and Wildlife Habitat

Objective: To minimize or, where possible, avoid any impacts on native fauna and habitat for native fauna.

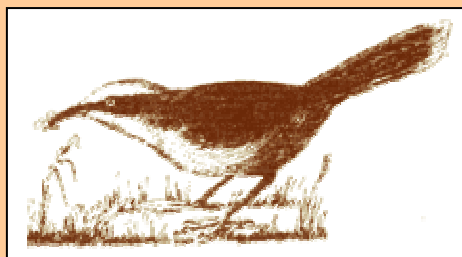
Threatening Processes for Native Fauna on Roadsides:

- Clearing and fragmentation of native vegetation
- Death and injury from traffic
- Pest animals, in particular foxes and feral cats
- Pest Plants
- Inadequate knowledge (land managers, community and government agencies) and lack of resources
- Decline of large old trees
- Firewood collection
- Inappropriate fire regimes

Guidelines:

- Retain all habitat components eg rocks, dead standing trees, fallen logs or leaf litter unless a safety or fire hazard.
- Any parties undertaking works or activities on roadsides should consider that native wildlife may be present in the area. Check for nests or other fauna habitat, and avoid disturbance to those areas.
- Fauna surveys on roadsides should be encouraged to identify any native fauna that is present in an area.
- Investigate lower speed limits or appropriate advisory signage on roads that have high numbers of native fauna road kills.
- Manage roadsides to reduce threats to native fauna.

Grey-crowned Babbler



Listed as threatened under the Flora and Fauna Guarantee Act in Victoria. Once formerly widespread through western, central and northern parts of the state.

Over the last century the species has disappeared from south-west Victoria and become rare in other areas due to clearing of habitat. Current populations are scattered from Murtoa in the West to Chiltern in the east.

The most suitable habitat for Grey-crowned Babbler occurs along well-treed roadsides and on private land. Threats to the species include: clearing, removal of logs for firewood, habitat modification or simplification eg 'tidying-up', ploughing of firebreaks and predation by feral pests. Management of habitat includes Minimizing disturbance of understorey on roadsides and revegetation to provide additional habitat.

4.6 Rare, Threatened or Significant Flora and Fauna

Objective: To protect all viable populations of threatened species on roadsides and avoid any impacts on significant native flora and fauna.

The *Flora and Fauna Guarantee (FFG) Act* gives special protection to rare species. Roadsides within Victoria contain 25% of all rare or threatened flora species and communities listed under the FFG Act. Within the Yarriambiack Shire 80 native fauna species and 153 native flora species are listed as rare or threatened (a list of Threatened flora and fauna species is included as Appendix Two). It is an offence to disturb or destroy species listed under the FFG Act and *Environment Protection and Biodiversity Conservation (EPBC) Act*. Heavy penalties apply for breaches of the EPBC Act.

Hairy-pod Wattle (*Acacia glandulicarpa*)



Hairy –pod Wattle is listed as vulnerable both nationally and in Victoria. Its' distribution is restricted to the southern Wimmera, from south-west of Horsham to north of Nhill. Road reserves are very important for the survival of this species. Threats to this species include roadworks and maintenance, installation of services, rabbit browsing and ripping of warrens.

Section 22.03-4 of the Yarriambiack planning scheme seeks to protect populations of Hairy-pod Wattle on roadsides. Additional permit requirements apply under this section. An Action Statement has also been prepared under the Flora and Fauna Guarantee Act 1988.

Guidelines:

- Consult with DSE to determine the location of rare or threatened flora and fauna species on roadsides in the Shire. Incorporate into a protection overlay for planning applications.
- Where works are undertaken on roadsides known to contain significant species, DSE is the referral authority under the FFG Act and must provide appropriate management advice.
- Flora or fauna surveys should be undertaken within the immediate vicinity of works.
- Alert relevant council staff, contractors and service providers, to the presence of significant species on roadsides where works may be undertaken and ensure appropriate guidelines are followed.
- Any works on roadsides that impact on threatened flora and fauna listed under the EPBC Act requires a permit from Environment Australia.
- Avoid any disturbance to sites containing significant species, and surrounding areas. Temporary fencing of areas may be required to ensure protection.
- Sites of threatened or significant flora and fauna species should be protected by appropriate actions prior to any fire prevention works being undertaken.
- All machinery used on site is to be washed-down to remove seeds, soil and other material, before entering the work site.
- No vehicles are to driven onto the roadside except where existing roads or tracks are present.
- Inspect works on sites to ensure compliance with management recommendations. Undertake these inspections both during and at the completion of works.
- Consider using signage to alert the community and workers to the presence of threatened species.
- When signage indicates significant flora species are present on a roadside contact the Council's Planning Department and quote site number from sign before undertaking any activities or works.
- Translocation of populations of significant flora and fauna may have been undertaken in some circumstances. A permit is required to move and possess protected flora under the FFG Act.

Signage of Significant Areas

Signage of significant roadside vegetation should be considered. Vicroads has suggested that a uniform approach to signage of significant areas between Council and Vicroads controlled roads would be desirable. It is recommended that liaison between the two management authorities be established, to enable consistent signage to be implemented across the municipal area. There are two types of roadside vegetation signage available.

'Significant Native Vegetation' - Alerts road workers, local residents and road travellers to conservation value of the roadside.

'Environmental Marker' - Discreetly marks areas to alert road workers, CFA members and adjacent landowners to the conservation significance of the site without drawing too much attention to general public.

Guidelines:

- Identify areas of roadside native vegetation in the Shire that are appropriate for signage.
- Liaise with adjoining landholders regarding the placement of signs, value of vegetation and appropriate management.
- Record the location and conservation status of all sites where signage is placed. Provide details of the location of these sites to Council staff and contractors undertaking works or activities.
- Develop an agreement with DSE/DPI for sites to be monitored and reviewed on annual basis for ongoing quality of vegetation, and for vandalism or removal of signage.

4.7 Large and Medium Old Remnant Trees

Objective: Avoid or minimize impacts on large and medium remnant trees.

Scattered old remnant trees are both significant biodiversity assets and features of the Yarriambiack landscape. In many cases they are all that remains of the original vegetation that existed in the area. Large old trees contain hollows that are vital habitat for many species including gliders, possums, birds and bats. These trees also act as stepping stones for fauna between other larger remnant vegetation.

Large and medium old trees are defined in the Native Vegetation Framework. They are prescribed by comparison with standard diameter at breast height (DBH) measurements related to particular EVCs.

Many old trees on private land within the Shire are suffering from old age, compaction and dieback. In many areas these trees are not regenerating due to weed invasion, pest animals, grazing or cropping and therefore will not replace themselves. Clearing of these large trees on private land still continues at a substantial rate, placing pressure on native fauna, such as the Grey-headed Flying-fox.

Guidelines:

- Ensure that these trees are protected when undertaking road construction, widening and maintenance works (Refer to Handbook).
- Ensure these trees are protected from activities such as firewood collection, agricultural activities and fire prevention measures.
- Do not slash or disturb regeneration.
- Undertake measures to encourage regeneration (eg weed and rabbit control, fencing).

4.8 Understorey Vegetation

Understorey refers to the layer of native vegetation beneath the tree canopy (overstorey). It comprises shrubs, native grasses, native herbs, orchids and many other types of plants. Many different understorey species often occur within a small area, providing a diversity of habitat. Understorey is very susceptible to disturbance and very difficult to restore or replace once disturbed or lost.

Guidelines:

- Ensure that areas of understorey are protected when undertaking road construction, widening and maintenance works (Refer to Handbook).
- Ensure understorey is protected from activities such as ploughing, slashing and fire prevention measures.
- Undertake measures to encourage regeneration (eg weed and rabbit control, fencing).
- Do not slash, cultivate or spray understorey vegetation.
- Train Council staff, CFA brigades, etc. in the identification of understorey vegetation, including native grasses.
- Do not disturb understorey vegetation.

5.0 Functional Issues

5.1 Road Safety

Objective: *To ensure the road network provides for the safe passage of vehicles.*

Safety of road users and the general community is the highest priority for road management. It is essential that road safety is not compromised by the issues of biodiversity management. Sight distances, clearance of vegetation to the approved templates and appropriate clear zones or safety barriers must be maintained to ensure safe trafficability of the road.

5.2 Road Design

Objective: *The design of new roads will satisfy road safety, road function and environmental protection requirements.*

Road design is critical to road safety and the proper functioning of roads. Appropriate road design can also minimize environmental impacts.

Guidelines:

- Design of new roads, road improvements or ancillary structures shall be in accordance with the Vicroads Road Design Guidelines and accommodate the best practice principles for biodiversity management from this strategy.
- Road design should minimize vegetation clearance.
- Planning permits are required for any native vegetation clearance and offsets will be required.
- All alternatives should be considered at the design stage to achieve both desired traffic improvements and minimize damage to remnant vegetation. Options may include:
 - Realignment of the road to reduce vegetation loss.
 - Relocation of the road onto cleared adjoining land
 - Offsetting the road to one side of the road reserve.
 - The use of guardrail or wire rope to minimize vegetation clearance.
 - Alternative pavement configurations and batter angles.
 - Improved signage.
 - Shoulder sealing or improved delineation, including tactile edgelines.
 - Revision of speed limits.
 - Kerb and channel installation to reduce the width required for drainage.
- Works on roads forming part of a wildlife corridor (biolink) network, should be planned to maintain a continuity of vegetative cover.
- Prior to commencing the design process the area should be inspected to determine sites of environmental, archaeological or cultural significance, and appropriate action undertaken to protect these values. If noxious weeds are present, an action plan is required to address the risk.

5.3 Road Construction, Widening and Maintenance

Objective: *Road construction, widening and maintenance works should maximise water quality from road reserves, minimize sediment, prevent soil erosion and waterway contamination, and give due consideration to the principles of native vegetation management outlined in the Native Vegetation Framework.*

Construction, widening and maintenance works are to be performed in accordance with the best works practice principles outlined in:

- Yarriambiack Shire Council Environmental Code of Practice for Works on Roadsides.
- This strategy.
- Yarriambiack Shire Council Road Management Plan.
- EPA Environmental Guidelines for Major Construction Sites (1996).
- EPA Doing it right on subdivisions (2004)

Native Vegetation Management

Protection and management of native vegetation and fauna is a key goal of roadside management, and is also a legislative and planning requirement. The principle of minimum disturbance should guide all activities undertaken in road reserves.

Planning permits are required for removal of native vegetation subject to the provisions and exemptions of the local planning scheme and the Native Vegetation Framework. It is a recommendation of this strategy that Council seek approval for a clearance template from DSE that will obviate the need for individual planning permit applications for branch trimming associated with canopy clearance along roadsides. These provisions and exemptions are currently under review at the time of printing and may be subject to some changes as a result of this review.

Training of council staff and contractors involved in roadworks should be undertaken, and audits performed to ensure that the best works practices outlined in the Environmental Code of Practice are being employed.

Water Quality, Drainage, Soil Erosion and Sedimentation

High water velocities and bare ground are the principal causes of erosion, especially in combination with dispersive soils. Design of projects should aim at Minimizing water velocities by dissipating flows; Minimizing areas of disturbed ground and retaining vegetation cover where possible. Best practice includes anticipating potential risk and being prepared for abnormal rain events.

5.4 Utility Services

Objective: To maintain service provision to the community while Minimizing adverse effects on native vegetation.

Electricity, Gas, Water, Sewerage and Communications authorities have rights of access to road reserves for the location of services. Service installation and maintenance often results in damage to native vegetation, erosion, weed spread and weed invasion.

The most extensive assets are those associated with electricity provision for which maintenance activities will be undertaken in accordance with the *Code of Practice for Powerline Clearance (Vegetation) 1996*.

Other utilities often lack coordination regarding installation and maintenance of services, with rehabilitation of works frequently being poor or non-existent.

Guidelines:

- Any new works shall be planned to minimize the disturbance to vegetation, specifically consideration should be given to locating proposed assets in easements in adjoining cleared land where available.
- Route selection will consider:
 - Conservation significance of roadside
 - Vegetation Protection Overlays when developed.
 - Environmental Significance Overlays when developed.
 - Sites of Cultural or Heritage significance.
 - Offset requirements to achieve Net Gain.
- Planning permits must be obtained for all new works, including the replacement of old services. Applications are subject to the provisions of the local planning scheme, the Native Vegetation Framework and should include an action plan for noxious weeds if present on the site.
- Council should ascertain that contractors performing works have undertaken environmental awareness training prior to commencement, to ensure best works practices are employed.
- Limits of work, parking areas, access tracks and material/plant/equipment storage areas need to be located prior to the commencement of works to minimize impacts on remnant vegetation.
- Rehabilitation of disturbed areas will be at the utilities cost.

5.5 Rest Areas

Objective: To provide rest areas for drivers.

Rest areas are provided throughout the road network to reduce driver fatigue. These areas are frequently located to enhance appreciation of natural, scenic or historical features.

When locating rest areas, ensure that vegetation loss is minimized and parking areas do not encroach on the root zones of existing trees.

Like stockpile sites, rest areas should be regularly inspected for weeds, which are to be controlled before they flower and set seed.

6.0 Pest Animals and Plants

The current management arrangements regarding both weed and pest animal control on roadsides are clearly ad hoc and lack an integrated approach. The CaLP Act requires that landowners on local roads control pest animals and some pest plants adjacent to their properties, however landowners are only one of many roadside users who have an influence on levels of pest infestation. For example, roadworks and service installation can often contribute to the spread and introduction of pests. Many pest plants are not covered by regulations, especially environmental weeds, and legislative requirements are often not enforced. Landowners may also perceive little benefit in pest control, especially given the high cost and effort required.

Pest plants and animals both have severe adverse effects on native vegetation and a greater focus in initiating and implementing pest control programs on roadsides would be compatible with the aims and objectives of this strategy. Improving works practices and enforcing legal requirements should assist in long term pest reduction.

6.1 Pest Animals

Objective: To minimize the impacts of pest animals on native flora and fauna on roadsides, and to minimize damage to vegetation from pest animal control measures.

The major pest animal species in the Shire as defined under the CaLP Act are rabbits, foxes and feral cats. Additionally, white snails pose a local threat to cropping activities. Pest animals have many detrimental impacts on the natural environment, including:

- Limiting native vegetation regeneration by eating seedlings
- Contributing to land degradation by burrowing and scratching soils
- Reducing biodiversity by killing native animals, or outcompeting them for available food sources
- Spreading weeds

Under the CaLP Act 'A land owner must take all reasonable steps to prevent the spread of regionally controlled weeds and established pest animals on a roadside that adjoins the land owner's land.' (except arterial roads controlled by Vicroads). Written approval is required from DSE for removal of native vegetation associated with vermin control (eg. ripping rabbit warrens beneath native shrubs). Guidelines for pest animal control are outlined in the Community Handbook.



Damage to native vegetation should be minimized during pest animal control operations.

6.2 Pest Plants

Objective: To contain and reduce the impacts of weed infestations on roadsides, especially in areas of remnant vegetation.

Pest plants are a major threat to native vegetation on roadsides, especially given the linear nature of these areas. Pest plants can also have a major economic impact on primary production.

Responsibility for control of weeds on roadsides and adjacent land tenures.

Weed Category (and level of control)	Land Tenure or Road Type	Responsibility
State Prohibited Weeds (Eradication)	All land, including private land	DSE/DPI
Regionally Prohibited Weeds (Eradication)	Private land Arterial roads (highways, freeways and main roads) Local roads (other open roads) Unlicensed Unused Road Reserves Licensed Unused Road Reserves Other Crown Land	Landholder Vicroads DPI DSE Licensee DSE
Regionally Controlled Weeds (Prevent Growth and Spread)	Private land Arterial roads (highways, freeways and main roads) Local roads (other open roads) Unlicensed Unused Road Reserves Licensed Unused Road Reserves Other Crown Land	Landholder Vicroads Adjacent Landholder DSE Licensee DSE

Strategies for the management of weeds have been developed at a national, state and regional level. The implementation of these various strategies at a regional level is outlined in Weed Action Plans prepared by the Mallee and Wimmera CMAs. These plans provide a strategic approach for weed management within the Shire.

The role of local government has been established in Weed Action Plans to:

- Manage pest plant impacts on council freehold land and the adjoining roadsides.
- Assist with information exchange.
- Assist with the co-ordination of community weed management programs.
- Act as a community advocate on weed issues.
- Develop and apply local weed management strategies.
- Exercise statutory responsibilities through the planning scheme to encourage responsible weed management.

Where it can be clearly demonstrated that the Shire has caused the spread of weeds on roadsides, they will assume responsibility for controlling those infestations. Detailed guidelines for weed management are outlined in the both handbooks.

7.0 Cultural Heritage

Indigenous and non-indigenous cultural heritage provides a sense of community identity. Victoria's heritage includes archaeological sites, buildings and structures, created landscapes and community values and beliefs. Federal and State legislation aims to protect these cultural heritage values into the future. As any works or activities on road reserves have the potential to impact on heritage sites, it is important to identify heritage issues early in the planning stages of proposed works to enable impacts to be avoided, minimized or mitigated throughout the planning, design, construction and maintenance stages of the works.

All registered and unregistered Victorian Aboriginal archaeological sites are protected by the State *Archaeological and Aboriginal Relics Preservation Act 1972* and the Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*. All Victorian historical sites are protected by the State *Heritage Act 1995*. These Acts prohibit the wilful destruction or disturbance of any cultural heritage site, place or object, whether on private or public land.

Heritage Victoria and Aboriginal Affairs Victoria are the Victorian State Government instrumentalities that administer these Acts. All legislation relevant to the discovery of human remains is subordinate to the *Coroners Act 1985*. The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* recognises that the Aboriginal people of Victoria are the prior occupants of this state and defines and provides for the Aboriginal communities responsible for each part of the state. In Yarriambiack Shire, the communities that preside over Aboriginal sites are Goolum Goolum Aboriginal Cooperative Ltd., and North West Nations Clans Aboriginal Corporation.

Consultation and negotiation with local indigenous communities will assist in identifying Aboriginal cultural issues associated with roadsides (be aware that Native Title Claimant groups and groups operating within the Regional Cultural Heritage Program administered by Aboriginal Affairs Victoria, may be different - both groups need to be consulted). It is the local Aboriginal community that may provide consent to a developer for any act that might destroy or disturb an Aboriginal site under its jurisdiction.

Guidelines:

- Design works to avoid, minimize or mitigate impacts on cultural heritage.
- Train field staff to increase awareness of heritage issues and to increase recognition skills of indigenous artefacts such as mounds, middens, surface scatters, tools, stone quarries, burial sites and scar trees to assist in the identification and subsequent protection of new sites.
- Identify and protect roadside sites having cultural heritage values, address the requirements of cultural heritage stakeholders and satisfy State and Federal cultural heritage legislation.
- Assess cultural heritage values by the Burra Charter or Heritage Victoria criteria at the planning stages of any proposed works.
- Access the State Heritage Register, Heritage Inventory and Register of the National Estate to ascertain if sites are listed.
- Consult with Heritage Victoria, the National Trust of Australia (Victoria), the Royal Historical Society of Victoria and local historical societies for information on non-indigenous sites when conducting assessments.
- Ascertain if Heritage Overlay controls are applicable.
- Ascertain if the site is subject to Native Title claim with Native Title Services Victoria.
- Consult with local Aboriginal communities, Cultural Heritage Protection Officers, native title claimants and traditional owners on indigenous cultural heritage issues. Local communities preside over sites within the Shire. It is the relevant local community that may provide consent to a developer for any act that might destroy or disturb an Aboriginal site under its jurisdiction.
- Facilitate Aboriginal consultation through the South West and Wimmera Regional Cultural Heritage Program based at Warrnambool, and the North West Regional Cultural Heritage Program based at Swan Hill.
- Liaise with adjoining landholders regarding the cultural heritage values and appropriate management.
- Advise Heritage Services Branch, Aboriginal Affairs Victoria, and Department for Victorian Communities, if any proposed works may affect sites of significance, or if any new sites are found.
- Establish the cultural heritage values of a site through surface or sub-surface surveys if necessary. An indigenous representative must be present for any indigenous cultural heritage survey. Aboriginal Affairs Victoria and Heritage Victoria require notification prior to conducting a cultural heritage surface survey. Sub-surface surveys require endorsement of the local Aboriginal community and permits from Aboriginal Affairs Victoria and Heritage Victoria.
- Prepare a 'consent to disturb' application under section 21U of the Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*, if proposed works will have an impact on Aboriginal cultural heritage places, sites or objects.

8.0 Education and Awareness

The successful implementation of this strategy depends upon community capacity building and development of partnerships in an integrated regional approach.

The key aspects of any education program related to native vegetation management are:

- Developing awareness of the significance of remnant vegetation.
- Understanding how natural systems work.
- Appreciating the minimum disturbance philosophy to managing native vegetation.
- Understanding the impacts of particular activities on natural systems.
- Developing techniques to minimize those impacts.
- Developing partnerships to deal with vegetation issues in an integrated landscape scale approach.

Education programs must therefore aim at building comprehension and knowledge in these areas, and then providing the practical skills to translate this into on ground practice. Because of the diverse range of stakeholders in roadside management, delivery of programs needs to be tailored to address the needs of particular groups.

Staff and contractors engaged in road construction, widening and maintenance

Corporate cultural change is required to implement this strategy. To achieve this will require ongoing reinforcement and commitment from management in a sustained manner, to establish best roadside works practices as the norm.

Formal training in environmental care should be undertaken regularly in the format of 1 day sessions involving both classroom learning and field trips to relate learning outcomes to workplace activity. The following topics need to be covered:

- Native plant identification and basic vegetation quality and habitat assessments.
- Significance of native vegetation.
- Impacts of inappropriate works practices.
- Road safety requirements / alternative techniques.
- Chemical usage.
- Minimum disturbance techniques.
- Limit of works, parking and turning areas, stockpile site locations.
- Best works practices as outlined in the Environmental Code of Practice Handbook.
- Awareness of cultural heritage issues and improved artefact recognition.
- Soil erosion minimisation and sedimentation control techniques, concentrating on source control.
- Weed species identification.
- Reducing weed spread through vehicle hygiene procedures.

The requirement for external contractors to have attended approved roadside environmental care training should be included in tender specifications.

Additional specialised training for weed issues is available from DPI (Weedstop). It specifically addresses legislation, weed identification, vehicle inspection, vehicle washdown and job planning to minimize the spread of weeds.

Annual audits of environmental performance will indicate the effectiveness of any training undertaken, and highlight any deficiencies in works performance that need to be addressed.

Planning staff

Staff need to be competent in the above topics, but additional skills are required to implement the Native Vegetation Framework. DSE and University of Melbourne are currently piloting training courses in Habitat hectare assessment techniques, and attendance would be beneficial when these are available.

Landcare groups

The need for integrated landscape planning for revegetation and enhancement projects, especially in relation to corridor establishment, needs promotion through these groups. Field days held in conjunction with CMA's are needed to demonstrate the connections between regional strategies such as the draft Native Vegetation Plans and local action.

Fire management crews

As many people involved in CFA activities are volunteers, the time commitment to attend training sessions is onerous. Explanatory sessions at Brigade meetings, in conjunction with distribution of the Community Handbook, are recommended. These would need to detail the overview to this strategy's development and the broad values associated with native vegetation retention from the Council's perspective.

Where applicable, burning is the preferred method of fuel reduction in native vegetation areas. The CFA Brigades should be encouraged to maintain regular burning regimes, with reinforcement of this as a valuable fire protection and conservation activity.

Other issues to be addressed are appropriate usage of herbicides to achieve long-term fuel reduction and the width of ploughed firebreaks.

Community education

From the consultation process, it was evident that there are varying levels of comprehension of the issues covered by this strategy. The main task to address is raising the appreciation within the broad community of vegetation as a community asset.

Pamphlets, posters, field days, school activities, newsletters, information kits for new rural landholders, signage and websites can all be used to raise awareness of the following issues:

- The cost of vegetation loss to community eg salinity, water quality
- Viewing native vegetation as a community asset
- Roadside's importance in connecting vegetation and habitat
- The effects of disturbance on native vegetation, particularly ploughing and spraying
- The effects of weed infestation on fire risk and economic costs to the community
- The effects of pest animals and landholder's responsibilities
- Legal requirements on Government departments, Council and landholders to protect vegetation
- The importance of understorey vegetation
- The value of remnant vegetation in providing habitat for wildlife

Channels of communication are needed to enable people to be involved in roadside issues and actions. A visible Council presence throughout all levels of training and community involvement would assist in partnership building. Council assistance with funding applications and liaison with other government departments will also assist community members.

The desired outcome is the building of the community's capacity to understand roadside issues, such that they can contribute to managing the competing demands on roadsides in an integrated regional approach.

Utility Providers

General awareness training should be undertaken in the format of half-day sessions involving both classroom learning and field trips to relate learning outcomes to workplace activity.

Local experience suggests that utility companies have little awareness of the importance of maintaining native vegetation or implications of the Native Vegetation Framework.

The training should cover:

- The significance of native vegetation, particularly understorey
- The impacts of inappropriate works practices
- Minimum disturbance techniques specifically related to their works activities

Glossary

Biodiversity

The natural diversity of all life: the sum of all our native species of flora and fauna, the genetic variation within them, their habitats and the ecosystems of which they form an integral part.

Biodiversity conservation significance

A rating of the importance of native vegetation in terms of its relative abundance, condition and habitat value.

Bioregion

A landscape based approach to classifying regions using a range of environmental attributes such as climate, geomorphology, lithology and vegetation, as used in the Native Vegetation Framework.

Bioregional conservation status (of an EVC)

The conservation status of the native vegetation type in the context of a particular bioregion, taking account its original extent, current extent due to clearing, and the typical level of degradation of remaining stands.

Burning Regime

The frequency and intensity of fires, both in terms of fuel reduction and wildfire.

Clearing

Removal or destruction of native vegetation.

Conservation Value

A rating of the quality of native vegetation.

Cultural Heritage Site

A site containing physical evidence of historically significant human activity, comprising buried artefacts, structures or surface elements.

Cultural Significance

Places or objects which provide aesthetic, historic, scientific, social or spiritual value for past, present or future generations; including both indigenous and non-indigenous culture.

Ecological Vegetation Class (EVC)

Distinct vegetation types that vary depending on geology, soil type, aspect, rainfall, altitude and position in the landscape, which are then classified according to structure, habitat and ecological characteristics.

Extent

The range, magnitude or distance over which the native vegetation extends.

Habitat hectare

A site based measure of quality and quantity of native vegetation that is assessed in the context of the landscape and relevant native vegetation benchmarks.

Indigenous native vegetation

Native vegetation that naturally occurs or would normally be expected to occur in a region or on a site.

Landholder

A person who owns land, or who (whether by reason of ownership or otherwise) is in lawful possession or occupation, or has lawful management or control of land.

Lopping

The removal from a tree of foliage, which does not comprise the trunk(s) and that does not affect the continued health of the vegetation.

Native Vegetation

Vegetation that naturally occurs on a site.

Net Gain

The outcome for native vegetation and habitat where overall gains are greater than overall losses, and where individual losses are avoided where possible. Losses and gains are determined by a combined quality-quantity measure over a specified area and period of time. Gains may either be required by offsets for permitted clearing actions or as a result of landholder and government assisted efforts that are not associated with clearing.

Offset

A gain in native vegetation extent and/or condition that is permanently protected and linked to clearing of a particular. The vegetation will be actively managed for a period of ten years. Protection of the site is achieved by an ongoing permit condition or an agreement registered on the property title.

Planning Authority

Any person or body given power to prepare a planning scheme or an amendment to a planning scheme under S.9 of the *Planning and Environment Act 1987*.

Property management plan

A plan for a specific property, which maps out the intentions for the future and the steps proposed to realise this. It will embrace production, protection, development and capability.

Public land

Crown land managed by a public authority.

Recruitment

The production of new generations of plants, either by natural ecological processes or by managing native vegetation to encourage this to occur, eg ecological burns, restricting grazing.

Referral authority

The body or organisation to which particular applications are referred to, as specified in clause 66 of the VPP.

Regeneration

The reproduction of plants by natural seedfall, soil stored seed or resprouting after damage to existing plants.

Remnants

Areas of the naturally occurring native vegetation that remains in the landscape.

Revegetation

The process of reintroducing native vegetation through in situ planting or seeding, in areas effectively denuded of the original vegetation.

Roadsides

The area bounded by a roadway and the road reserve boundary.

Threatening processes

Actions, activities or behaviour that results in pressure on the continuing integrity or survival of native vegetation and biodiversity.

Understorey

A general term for the indigenous plants that grow under the upper canopy of vegetation. Usually includes small trees, shrubs, native grasses and orchids, etc.

Vegetation quality

Measure of the intactness of vegetation in relation to its site condition and landscape context.

Waterway

Any area that adjoins or is influenced by a body of water, including land immediately alongside small creeks and rivers (such as banks, gullies and dips which sometimes run with surface water), areas surrounding lakes, and wetlands which interact with the creek or river in times of flood.

Appendix 1 - Results of Consultation at Public Meetings and with Key Stakeholders

Initial contact was established with the Steering Committee, CFA, VFF and Landcare representatives. The purpose of this contact was to identify issues of concern regarding roadside management across the broad area covered by the RMS. Public meetings were then held at Hopetoun, Warracknabeal and Rupanyup to gain further input to the process. A summary of issues, comments and suggested solutions are presented below.

General

- increased traffic volumes leading to wider formation widths within existing road reserves is environmentally unsustainable for both flora and fauna
- clarify legal responsibilities of adjoining landowners
- be clear on what we are trying to achieve
- increased farm machinery width requires wider clearance
- maintenance of fencing requires clearance of native vegetation
- last remnants of native vegetation are all the more important because of their rarity
- lack of awareness of native species
- road safety has been compromised by tree encroachment and lack of trimming of overhanging trees
- high cost of establishing clear zones with either guardrail or tree removal
- cost shifting where council introduces weeds but landowner responsible for control
- sand drift smothers native vegetation and assists weed establishment on roadsides – reduction by use of minimum tillage farming techniques involves high capital cost and recurrent herbicide costs
- sand drift costs Council \$100,000pa in road clearance
- vermin harbour control techniques damage native vegetation
- white snails in lime areas damage crops

Road construction

- construction of previously unused roads has significant associated environmental loss
- construction of new roads should be considered on adjoining cleared land
- roads are indispensable to farming and the economy
- changes in land usage will require more road construction
- increasing width of farm machinery

Road maintenance

- grading progressively widens roads, removing shrubs and damaging tree roots
- grading activities spread weeds
- stockpiles encourage weeds
- trees should not be allowed to encroach on the road / drain formation or reduce visibility
- too many trees have been allowed to grow close to the road
- trees should not be in table drains
- tree trimming is not adequate to allow for farm machinery (Council already spend \$70,000pa on trimming)
- templates are required for lopping of trees
- line of sight at intersections not adequate because of vegetation
- parking, turning and material storage cause greatest off road damage
- maintenance spraying widths need to be defined
- clear guidelines should be established through RMS process for works procedures, equipment operation
- rocks and windrows impede slashing

Roadside management

- firewood collection removes fuel load for wildfire
- firewood collection destroys natural habitat
- storm damage timber should be utilised
- fallen timber on roadsides restricts fire truck access
- cropping of roadsides is a major community fundraiser
- cropping has been undertaken for 30 years
- cropping area has not extended with Minyip Lions Club
- cropping areas have extended in some areas
- cropping of roadsides should continue
- cropping of roadsides should be abandoned or phased out over 5 – 10 years
- other crops such as Wallaby Grass or Golden Wattles for seed should be considered
- cropping causes weed issues for adjoining landholders, especially in years when crop fails
- cropped areas will revert to weeds if abandoned
- where will replacement community income come from if cropping abandoned

- map existing cropping using aerial photos
- what is legal liability for cropping on roadsides
- droving has reduced
- Bulokes, Eucalypts and Golden Wattle have regenerated well on roadsides since droving reduced
- roadside biolinks should be planned with MFPP

Revegetation activities

- tree planting on roadsides is inappropriate
- tree plantings should be at suitable distance from roads, gates and intersections
- tree planting should not degrade efficacy of strategic firebreaks
- trees on roadsides are incompatible with stock movement
- tree plantings should always use indigenous local provenance stock
- emphasis should be on developing linkages with existing remnants
- regeneration should be encouraged by fencing around remnant trees on private land
- revegetation should not create harbour for vermin
- revegetation projects should be considered on a whole landscape scale – corridor linkages
- how are levels of offset plantings established
- plantings should avoid creating rabbit harbour

Community awareness

- a major aspect of improved roadside management will be community education in the long term
- assist and encourage community to be aware of roadside issues
- some people consider the roadside as their land, especially when they are responsible for weed control
- community tends to focus on single issues without considering the broader consequences e.g. spraying without considering follow on weeds
- lack of community consultation, information – previous strategies
- community not aware of native vegetation – can't identify on roadsides
- should use local knowledge

Legal obligations

- landowners responsibilities under the CaLP Act on local roads – weed control
- requirement for permits to remove, lop or destroy native vegetation
- permit requirements for moving stock
- falling timber on fences
- vegetation clearance allowed for fences
- dangerous trees
- protection for rare and endangered species eg *Pimelia spinescens*, *Sclerobeana napiformis*
- provide Environment Protection Overlays with known locations of rare species marked

Firebreaks

- ploughing leads to unnecessary weed invasion, degradation of conservation value
- narrow ploughed breaks have been shown to be ineffective in wildfire situations
- ploughed breaks are getting wider with modern farm machinery – 3m adequate
- there has been an escalation in private ploughed breaks
- many private sprayed breaks within 2m of fences on roadside
- there is no monitoring of ploughed / graded breaks
- Council should grade breaks 3m either side of road
- Council spraying / slashing / grading often done too late
- MFPP breaks must be maintained
- little contact between brigades and Council on MFPP
- CFA needs to review strategic firebreak network – effectiveness / extent
- roadside burning has diminished over past few years
- hard to get labour for roadside burning
- slashed breaks only 3m wide
- move from slashing to spraying to save money in the short term encourages higher fuel loads
- what are we trying to achieve with breaks – private benefit or strategic breaks?
- tree clearance should be maintained to allow fire vehicle access

Weed management

- Council works spread noxious weeds especially with grading
- adjacent landowners onerous responsibility for weeds on road reserve
- farm transport spreads weeds
- DSE staff have been cut

- Bindii, Erodium, Cape Tulip, Oxalis, Onion Weed, Cape Weed, Bridal Creeper, Pattersons curse, Bathurst burr, Rye grass, Horehound, Boxthorn, Brome grass, Wild Oats, Paddy pies, Prickly Pear, Anisida, Marshmallow grass, Thistles, Heliotrope, Wild Tomato, Wild Turnip, Wild Radish and Peppercorn trees cited as major problems
- Chilean Needle Grass emerging weed in shire
- lack of council involvement in weed eradication activities
- increasing number of summer growing weeds as a result of herbicide spraying
- sustained effort needed to control weeds from becoming more widespread

Suggested solutions

- have management plans for high conservation roadsides
- education required as to effects of disturbance especially weed spread by roadworks and livestock
- training for council staff, DSE, DPI, contractors and utilities
- provide Council staff with conservation status maps of roadsides
- assist people to discriminate as to which roads are highly regarded, have reconstruction potential or are past help
- set policy on firewood collection
- clear definition of landholder's responsibilities
- cooperation between council and utilities if weeds created by disturbance
- stockpiles to be monitored and sprayed for weeds
- rocks and windrows should not be left on roadsides after works - impedes future slashing
- fire prevention policy should clearly stipulate width and methods
- identify and map priority areas for weed control
- identify areas for habitat / biolink enhancement
- community education needed – inappropriate plantings – location, species, strategic revegetation
- single page proforma to be developed for planting activities – local provenance stock, distances from powerlines, intersections, road, fences and gates, adjoining land holder contacted, compatible with MFPP firebreaks and planned biolinks
- encourage cooperation with all authorities
- education and promotion of roadsides values in general community
- community education in recognizing native vegetation especially native grasses
- community education in weed recognition and control
- community should convey known locations of rare species to Council and DSE
- consult with adjoining landowners
- promote best practice with herbicides
- establish clearance template for tree trimming
- establish regular tree canopy clearance to template with reseal / resheet program
- funding required for ongoing monitoring and enforcement of roadside issues in line with RMS
- map existing cropping areas using aerial photos and issue written agreements for existing activities with existing groups
- require permits for any extension of cropping beyond existing – permits must have rehabilitation plan for when cropping ceases, include provisions for weed control and must have agreement of adjoining landowners
- EPA and CMA involvement in education to reduce sand drift
- Vicroads to be advised of locations of weed problems eg horehound on Hopetoun-Rainbow Road

Appendix 2 – Significant Fauna and Flora in Yarriambiack Shire Council

2.1 Australian & Victorian Significant Fauna

Data from: Atlas of Victorian Wildlife: Biodiversity and Natural Resources: DSE – 2004

Conservation Status

Australian (AROTS): X – extinct, C – critically endangered E – endangered, V – vulnerable

Victorian (VROTS): x- extinct, c- critically endangered, e-endangered, v- vulnerable, n - near threatened, d- data deficient, r- rare

FFG	EPBC	VROTS	Common Name	Scientific Name	Family Name
		v	Australasian Shoveler	Anas rhynchotis	Anatidae
f		c	Australian Bustard	Ardeotis australis	Otididae
		n	Australian Pratincole	Stiltia isabella	Glareolidae
f		v	Baillon's Crake	Porzana pusilla	Rallidae
		v	Black Falcon	Falco subniger	Falconidae
		n	Black-chinned Honeyeater	Melithreptus gularis	Meliphagidae
		n	Black-eared Cuckoo	Chrysococcyx osculans	Cuculidae
f	E	e	Black-eared Miner	Manorina melanotis	Meliphagidae
f		e	Blue-billed Duck	Oxyura australis	Anatidae
f		v	Brolga	Grus rubicunda	Gruidae
		n	Brown Quail	Coturnix ypsilophora	Phasianidae
		n	Brown Treecreeper	Climacteris picumnus	Climacteridae
f		e	Bush Stone-curlew	Burhinus grallarius	Burhinidae
		n	Chestnut Quail-thrush	Cinclosoma castanotus	Cinclosomatidae
		v	Common Dunnart	Sminthopsis murina	Dasyuridae
		n	Coral Snake	Simoselaps australis	Elapidae
f		n	Crested Bellbird	Oreoica gutturalis	Pachycephalidae
		v	Curl Snake	Suta suta	Elapidae
f		v	Diamond Firetail	Stagonopleura guttata	Passeridae
		d	Eastern Bearded Dragon	Pogona barbata	Agamidae
		n	Fat-tailed Dunnart	Sminthopsis crassicaudata	Dasyuridae
f		e	Freckled Duck	Stictonetta naevosa	Anatidae
		n	Glossy Ibis	Plegadis falcinellus	Threskiornithidae
		v	Golden Perch	Macquaria ambigua	Percichthyidae
f		v	Great Egret	Ardea alba	Ardeidae
f		e	Grey-crowned Babbler	Pomatostomus temporalis	Pomatostomidae
f	V	v	Grey-headed Flying-fox	Pteropus poliocephalus	Pteropodidae
f		v	Ground Cuckoo-shrike	Coracina maxima	Campephagidae
f	V	e	Growling Grass Frog	Litoria raniformis	Hylidae
f		e	Gull-billed Tern	Sterna nilotica	Laridae
		v	Hardhead	Aythya australis	Anatidae
f		n	Hooded Robin	Melanodryas cucullata	Petroicidae
		v	Inland Dotterel	Charadrius australis	Charadriidae
f		c	Intermediate Egret	Ardea intermedia	Ardeidae
f		v	Lewin's Rail	Rallus pectoralis	Rallidae
		n	Little Button-quail	Turnix velox	Turnicidae
f		e	Little Egret	Egretta garzetta	Ardeidae
		n	Little Pygmy-possum	Cercartetus lepidus	Burramyidae
f	E	e	Macquarie Perch	Macquaria australasica	Percichthyidae

FFG	EPBC	VROTS	Common Name	Scientific Name	Family Name
		v	Magpie Goose	Anseranas semipalmata	Anseranatidae
f		v	Major Mitchell's Cockatoo	Cacatua leadbeateri	Cacatuidae
f		n	Mallee Worm-Lizard	Aprasia aurita	Pygopodidae
f	V	e	Malleefowl	Leipoa ocellata	Megapodiidae
		n	Mitchell's Hopping-mouse	Notomys mitchelli	Muridae
f	V	e	Murray Cod	Maccullochella peelii peelii	Percichthyidae
		v	Musk Duck	Biziura lobata	Anatidae
		n	Nankeen Night Heron	Nycticorax caledonicus	Ardeidae
f		v	Painted Honeyeater	Grantiella picta	Meliphagidae
		n	Pied Cormorant	Phalacrocorax varius	Phalacrocoracidae
f	V	c	Plains-wanderer	Pedionomus torquatus	Pedionomidae
		v	Purple-gaped Honeyeater	Lichenostomus cratitius	Meliphagidae
		n	Red Kangaroo	Macropus rufus	Macropodidae
		n	Red-backed Kingfisher	Todiramphus pyrrhopygia	Halcyonidae
f		v	Red-chested Button-quail	Turnix pyrrhotorax	Turnicidae
f		e	Redthroat	Pyrrholaemus brunneus	Pardalotidae
f	V	v	Regent Parrot	Polytelis anthopeplus	Psittacidae
		v	Royal Spoonbill	Platalea regia	Threskiornithidae
f		n	Slender-billed Thornbill	Acanthiza iredalei	Pardalotidae
		n	Spotted Harrier	Circus assimilis	Accipitridae
		n	Striated Grasswren	Amytornis striatus	Maluridae
		e	Sun Moth (5091)	Synemon sp c.f. selene	Und. Invertebrate
f	E	e	Swift Parrot	Lathamus discolor	Psittacidae
		n	Western Pygmy-possum	Cercartetus concinnus	Burramyidae
		v	Whimbrel	Numenius phaeopus	Scolopacidae
		n	Whiskered Tern	Chlidonias hybridus	Laridae
f		v	White-browed Treecreeper	Climacteris affinis	Climacteridae
f			Yellow-bellied Sheathtail Bat	Saccolaimus flaviventris	Emballonuridae

2.2 Australian & Victorian Threatened Flora

Data from: Flora Information System: Biodiversity and Natural Resources: DSE – 2004

Conservation Status

Australian (AROTS): X=Extinct, E= Endangered, V=Vulnerable, R=Rare, K=Poorly known

Victorian (VROTS): x=extinct, e=endangered, v=vulnerable, r=rare, k=poorly known, f= listed under Flora and Fauna Guarantee Act

FFG	EPBC	VROTS	Scientific Name	Common Name	Family Name
		v	Acacia ancistrophylla var. lissophylla	Dwarf Myall	Mimosaceae
		x	Acacia argyrophylla	Silver Mulga	Mimosaceae
		k	Acacia farinosa	Mealy Wattle	Mimosaceae
f	V	v	Acacia glandulicarpa	Hairy-pod Wattle	Mimosaceae
		r	Acacia lineata	Streaked Wattle	Mimosaceae
		v	Acacia oswaldii	Umbrella Wattle	Mimosaceae
		v	Acacia trineura	Three-nerve Wattle	Mimosaceae
		r	Acacia victoriae	Bramble Wattle	Mimosaceae
		r	Acacia X grayana	Wimmera Wattle	Mimosaceae
f			Allocasuarina luehmannii	Buloke	Casuarinaceae
		k	Allocasuarina mackliniana	Western Sheoak	Casuarinaceae
		v	Amyema linophylla subsp. orientale	Buloke Mistletoe	Loranthaceae

FFG	EPBC	VROTS	Scientific Name	Common Name	Family Name
		r	<i>Atriplex papillata</i>	Coral Saltbush	Chenopodiaceae
		r	<i>Austrodanthonia monticola</i>	Small-flower Wallaby-grass	Poaceae
		r	<i>Austrodanthonia setacea</i> var. <i>breviseta</i>	Short-bristle Wallaby-grass	Poaceae
		r	<i>Austrostipa hemipogon</i>	Half-bearded Spear-grass	Poaceae
		r	<i>Austrostipa mundula</i>	Neat Spear-grass	Poaceae
		r	<i>Austrostipa puberula</i>	Fine-hairy Spear-grass	Poaceae
		e	<i>Bossiaea walkeri</i>	Cactus Bossiaea	Fabaceae
f		v	<i>Brachyscome chrysoglossa</i>	Yellow-tongue Daisy	Asteraceae
		v	<i>Brachyscome debilis</i> s.s.	Weak Daisy	Asteraceae
		r	<i>Bromus arenarius</i>	Sand Brome	Poaceae
		v	<i>Caladenia stricta</i>	Upright Spider-orchid	Orchidaceae
	E	v	<i>Caladenia tensa</i>	Rigid Spider-orchid	Orchidaceae
f	E	e	<i>Caladenia xanthochila</i>	Yellow-lip Spider-orchid	Orchidaceae
		r	<i>Calandrinia corrigioloides</i>	Strap Purslane	Portulacaceae
		r	<i>Calotis cymbacantha</i>	Burr-daisy	Asteraceae
		k	<i>Cardamine tenuifolia</i>	Slender Bitter-cress	Brassicaceae
f		e	<i>Casuarina obesa</i>	Swamp Sheoak	Casuarinaceae
		r	<i>Centipeda crateriformis</i> subsp. <i>compacta</i>	Compact Sneezeweed	Asteraceae
		r	<i>Centipeda thespidioides</i> s.l.	Desert Sneezeweed	Asteraceae
		r	<i>Chenopodium desertorum</i> subsp. <i>desertorum</i>	Frosted Goosefoot	Chenopodiaceae
f		v	<i>Comesperma polygaloides</i>	Small Milkwort	Polygalaceae
		r	<i>Convolvulus crispifolius</i>	Silver Bindweed	Convolvulaceae
f		e	<i>Cullen cinereum</i>	Hoary Scurf-pea	Fabaceae
		e	<i>Cullen pallidum</i>	Woolly Scurf-pea	Fabaceae
		k	<i>Cyperus victoriensis</i>	Yelka	Cyperaceae
		r	<i>Dillwynia uncinata</i>	Silky Parrot-pea	Fabaceae
		r	<i>Elachanthus glaber</i>	Smooth Elachanth	Asteraceae
		r	<i>Elachanthus pusillus</i>	Small Elachanth	Asteraceae
		k	<i>Eleocharis pallens</i>	Pale Spike-sedge	Cyperaceae
		v	<i>Eragrostis australasica</i>	Cane Grass	Poaceae
		v	<i>Eragrostis lacunaria</i>	Purple Love-grass	Poaceae
		v	<i>Eryngium paludosum</i>	Long Eryngium	Apiaceae
		r	<i>Eucalyptus phenax</i>	Green-leaf Mallee	Myrtaceae
		v	<i>Goodenia lunata</i>	Stiff Goodenia	Goodeniaceae
		e	<i>Hyalosperma stoveae</i>	Dwarf Sunray	Asteraceae
		k	<i>Isolepis australiensis</i>	Inland Club-sedge	Cyperaceae
		v	<i>Jasminum didymum</i> subsp. <i>lineare</i>	Desert Jasmine	Oleaceae
f	E	v	<i>Lachnagrostis adamsonii</i>	Adamson's Blown-grass	Poaceae
		e	<i>Leiocarpa leptolepis</i>	Pale Plover-daisy	Asteraceae
		k	<i>Lepidium fasciculatum</i>	Bundled Peppergrass	Brassicaceae
f	E	e	<i>Lepidium monoplacoides</i>	Winged Peppergrass	Brassicaceae
		k	<i>Lepidium papillosum</i>	Warty Peppergrass	Brassicaceae
		k	<i>Lepidium pseudohyssopifolium</i>	Native Peppergrass	Brassicaceae
		v	<i>Leptorhynchus waitzia</i>	Button Immortelle	Asteraceae
		k	<i>Maireana aphylla</i>	Leafless Bluebush	Chenopodiaceae
		v	<i>Microcybe multiflora</i> subsp. <i>multiflora</i>	Red Microcybe	Rutaceae
		e	<i>Microcybe pauciflora</i> subsp. <i>pauciflora</i>	Yellow Microcybe	Rutaceae
		r	<i>Millotia macrocarpa</i>	Large-fruited Millotia	Asteraceae
		r	<i>Muehlenbeckia horrida</i> subsp. <i>horrida</i>	Spiny Lignum	Polygonaceae

FFG	EPBC	VROTS	Scientific Name	Common Name	Family Name
	V	v	Myriophyllum porcatum	Ridged Water-milfoil	Haloragaceae
		r	Olearia minor	Satin Daisy-bush	Asteraceae
		r	Olearia passerinoides	Shiny Daisy-bush	Asteraceae
		v	Ophioglossum polyphyllum	Upright Adder's-tongue	Ophioglossaceae
		r	Poa drummondiana	Knotted Poa	Poaceae
		r	Poa lowanensis	Mallee Tussock-grass	Poaceae
		r	Podolepis canescens	Grey Podolepis	Asteraceae
f	E	e	Prasophyllum suaveolens	Fragrant Leek-orchid	Orchidaceae
f	V	v	Pterostylis cheraphila	Floodplain Rustyhood	Orchidaceae
f	V	e	Pterostylis xerophila	Desert Greenhood	Orchidaceae
f			Ptilotus erubescens	Hairy Tails	Amaranthaceae
		r	Pultenaea densifolia	Dense Bush-pea	Fabaceae
		k	Rumex stenoglottis	Tongue Dock	Polygonaceae
f	E	e	Sclerolaena napiformis	Turnip Copperburr	Chenopodiaceae
		r	Sclerolaena uniflora	Two-spined Copperburr	Chenopodiaceae
		r	Senecio cunninghamii var. cunninghamii	Branching Groundsel	Asteraceae
		r	Senecio gregorii	Fleshy Groundsel	Asteraceae
		v	Sida fibulifera	Pin Sida	Malvaceae
		k	Stackhousia aspericocca subsp. 1	Rough-nut Stackhousia	Stackhousiaceae
		r	Stuartina hamata	Prickly Cudweed	Asteraceae
		r	Swainsona behriana	Southern Swainson-pea	Fabaceae
f	V	e	Swainsona murrayana	Slender Darling-pea	Fabaceae
		v	Swainsona sericea	Silky Swainson-pea	Fabaceae
f		e	Swainsona swainsonioides	Downy Swainson-pea	Fabaceae
		k	Teucrium albicaule	Scurfy Germander	Lamiaceae
		k	Teucrium sessiliflorum	Camel Bush	Lamiaceae
		v	Thelymitra azurea	Azure Sun-orchid	Orchidaceae
		v	Thelymitra X macmillanii	Crimson Sun-orchid	Orchidaceae
		e	Triglochin trichophora	Torpedo Arrowgrass	Juncaginaceae
		r	Trigonella suavissima	Sweet Fenugreek	Fabaceae
		k	Triodia bunicola	Southern Porcupine Grass	Poaceae
		r	Velleia arguta	Grassland Velleia	Goodeniaceae
		r	Velleia connata	Cup Velleia	Goodeniaceae
		r	Vittadinia condyloides	Club-hair New Holland Daisy	Asteraceae
		r	Vittadinia cuneata var. hirsuta	Fuzzy New Holland Daisy	Asteraceae
		r	Vittadinia cuneata var. morrisii	Fuzzy New Holland Daisy	Asteraceae
		v	Vittadinia megacephala	Giant New Holland Daisy	Asteraceae
		v	Vittadinia pterochaeta	Winged New Holland Daisy	Asteraceae

Appendix 3 - Key Weed Species in Yarriambiack Shire

WCMA – Wimmera Catchment Management Authority (CMA)

MCMA – Mallee CMA

Common Name	Botanical Name	Environmental Weed	State Prohibited	Regionally Prohibited	Regionally Controlled	WoNS	CMA Weeds
African Daisy	<i>Senecio pterophorus</i>						WCMA
African Feather Grass	<i>Pennisetum macrourum</i>						
Bathurst Burr	<i>Xanthium spinosum</i>						WCMA/ MCMA
Blackberry	<i>Rubus fruticosus</i>						WCMA
Blue Canary Grass	<i>Phalaris coerulescens</i>						
Boneseed	<i>Chrysanthemoides monilifera</i>						MCMA
Boxthorn	<i>Lycium ferocissimum</i>						MCMA
Bridal Creeper	<i>Myrsiphyllum asparagoides</i>						MCMA
Brome Grass	<i>Bromus spp.</i>						
Cape Broom	<i>Genista monspessulana</i>						WCMA
Cape Tulip	<i>Homeria sp.</i>						WCMA
Cape Weed	<i>Arctotheca calendula</i>						
Chilean Needle Grass	<i>Nassella neesiana</i>						WCMA
English Broom	<i>Cytisus scoparius</i>						
Gorse/Furze	<i>Ulex europeus</i>						
Hardheads	<i>Acroptilon repens</i>						MCMA
Heliotrope	<i>Heliotropium spp.</i>						
Herrons -bill	<i>Erodium spp.</i>						
Horehound	<i>Marrubium vulgare</i>						WCMA/ MCMA
Long-styled Feather Grass	<i>Pennisetum villosum</i>						WCMA
Nassella sp.	<i>Nassella sp.</i>						
Onion Weed	<i>Asphodelus fistulosus</i>						
Paterson's Curse	<i>Echium plantagnifolium</i>						WCMA
Peppercorn Tree	<i>Schinus molle</i>						
Phalaris	<i>Phalaris aquatica</i>						
Prairie Ground Cherry	<i>Physalis viscosa</i>						WCMA/ MCMA
Prickly Pear	<i>Opuntia stricta</i>						MCMA
Ragwort	<i>Senecio jacobaea</i>						
Serrated Tussock	<i>Nassella trihotoma</i>						
Silver-leaf Nightshade	<i>Solanum elaeagnifolium</i>						WCMA/ MCMA
South African Weed Orchid	<i>Monadenia bracteata</i>						WCMA
Spanish Heath	<i>Erica lusitanica</i>						
Spiny Burr Grass	<i>Cenchrus incertus</i>						WCMA/ MCMA
Spiny Rush	<i>Juncus acutus</i>						
Stinkwort	<i>Dittrichia graveolens</i>						
St John's Wort	<i>Hypericum perforatum</i>						WCMA
Soursob, Wood Sorrels	<i>Oxalis spp</i>						
Wheel Cactus	<i>Opuntia robusta</i>						MCMA
Wild Garlic	<i>Allium vineale</i>						WCMA/ MCMA
Wild Turnip	<i>Brassica tournefortii</i>						

Appendix 4 – Checklist for Tree Planting and Revegetation on Roadsides

Checklist for Revegetation	Checked
Plans for the revegetation or tree planting project have been submitted to the Council at least two months prior to works and permission has been granted from the Shire.	
Plantings are not being undertaken on strategic firebreaks designated in the Municipal Fire Prevention Plan.	
Plans identify the location of all utility services.	
Adjacent landholders have been consulted.	
Indigenous plants (plants that naturally occur in an area and grown from seed collected in that area) have been sourced and used in the project. (Allow up to 12 months to ensure indigenous plants can be sourced).	
The project includes adequate maintenance for a minimum of two years from planting.	
Plantings are compatible with planned biolinks.	
Plantings will have a natural appearance (rows avoided).	
Shrubs and understorey species are being planted in dense clumps.	
Plantings are setback 9 metres from the centreline of road, 10 metres from gates and 80 metres from intersections.	
Plantings under powerlines are less than 3m tall.	
Plantings do not obscure traffic sight lines and visibility. Trees with a mature trunk diameter of 100mm at base are not being planted within sight lines. Has Council advised on appropriate set backs for the road safety aspects as specified in the Vicroads Design Guidelines?	
Plantings are not being undertaken in high conservation areas, except for infill plantings of significant or specific species, undertaken by people with suitable experience.	

Appendix 5 - Roadside Conservation Status Map

