



Roadside Management Strategy

May 2007



West Wimmera 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 West Wimmera Shire Council, their staff and 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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Natural Heritage Trust



Waterways for Life.



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How to use this strategy

The West Wimmera 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
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.

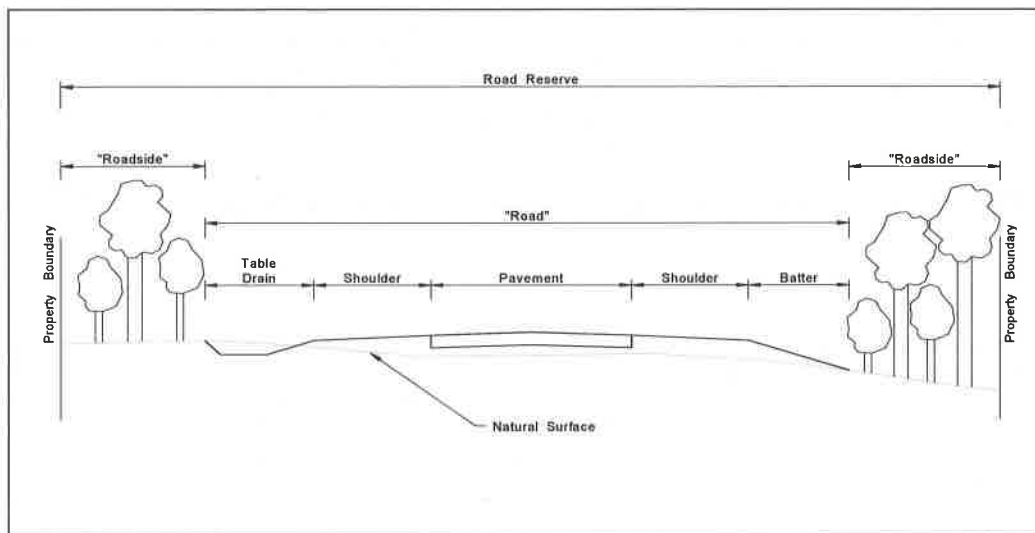
More recently roadsides have been recognised as being very valuable for the conservation of native plants and animals. Roadsides also provide amenity value for both the local community and tourists who visit the area, and contain sites of cultural heritage.

The purpose of this strategy is to encourage, protect and enhance the environmental, amenity and cultural values of roadsides, while maintaining the safety and functionality of the road infrastructure.

Roadsides contain substantial areas of Crown Land with shared management responsibilities, including Councils accountability under the Road Management Act. This roadside management strategy has been developed to address issues confronting the management of roadside vegetation in West Wimmera Shire.

The development of this strategy has been undertaken under the direction of West Wimmera Shire Council, with support from the Wimmera CMA. The scope of this strategy is the management of rural roadsides under the control of West Wimmera Shire Council. Within the Shire a total of 2,761 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 Objectives of the Strategy

This strategy relates to the management of West Wimmera 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 road users, and any other policies, strategies and standards for road design, construction and maintenance, whether developed by the Shire or other organizations with that responsibility, shall take precedence over this strategy.

1.3 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. Areas of native vegetation in Victoria have become fragmented and isolated.

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').

The West Wimmera Shire Council's Municipal Strategic Statement identifies the loss of native vegetation and habitat as a key environmental management issue in the Shire. That Statement identifies that approximately 30% of the Shire comprises public land containing native vegetation.

Roadsides now contain some of the last remnants of the vegetation that was originally widespread throughout the Shire. Roadside 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 has identified roadside areas as providing '...some of the last remaining areas of significant remnant native vegetation, and many plant species are found only on roadsides'. Many of the road reserves in West Wimmera have been mapped as containing vegetation of medium and high conservation significance.

1.4 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.

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 organizations as to what is acceptable practice on roadsides.

Council will review this strategy annually to ensure the actions in the strategy are being achieved.

1.5 Boundaries and Native Vegetation of the West Wimmera Shire



The West Wimmera Shire Council covers 9,116 square kilometres. The Shire incorporates parts of the Wimmera, Mallee and Dundas Tableland bioregions. It is notable that the Shire contains 25% of the State's individual wetlands and six per cent of the State's total wetland area. A large proportion of the Little Desert National Park and the southern section of the Big Desert Wilderness Park also occur within the Shire.

Prior to European settlement a diverse range of native vegetation types existed across the Shire, varying from wetlands in the south to mallee in the north. Some woodlands were dominated by Buloke, Yellow Gum and Red Gum on heavier soils and Brown Stringybark on lighter soils. Red Gum woodlands also fringed numerous scattered waterbodies and wetlands. The understorey in these woodlands was often diverse, and contained a variety of shrubs, wildflowers and native grasses.

Other plant communities included woodlands, Mallee Scrublands and heathlands. Tree species in these woodlands included Brown Stringybark, Desert Stringybark, various Mallees and Oyster Bay Pine. The understorey in these woodlands and shrublands consisted of Heaths, Myrtles, Banksias and Grass Trees.

Other areas appear to have been dominated by a tall open Mallee, known as Big Mallee, which was extensively cleared for cereal cropping. Interspersed across these areas are ridges and depressions with vegetation ranging from Bluebush Shrublands to Buloke Woodlands, depending on the soil type.

1.6 Priority Actions

Number	Actions	Responsible Agency	Timeline	Key Performance Indicator
1	Incorporate this Strategy into the West Wimmera Planning Scheme as a reference document	Council	2008	Strategy adopted as reference document in next MSS review
2	Review Local Law relating to roadside grazing and droving, and review activities that have a significant impact on roadsides. Any Local Law relating to road reserves should reflect this strategy.	Council	Ongoing	Local law reviewed and new laws adopted
3	Obtain DSE approval for maintenance clearance template or code of practice for vegetation removal.	Council	2007	Template approved
4	Incorporate best works practice guidelines into road work specifications and tender documents	Council and Service Providers	2007 & Ongoing	Number of contracts with guidelines incorporated
5	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	
6	Incorporate EVC conservation significance within the existing conservation value maps of roadsides (Sec.4.4)	Council/CMA	2008	EVC ratings incorporated
7	Consider Vegetation Protection Overlays for high conservation roadsides (see Section 4.4) and for biolinks where contained wholly within road reserves.	Council/CMA	2009	VPOs incorporated in Planning Scheme
8	Instigate protection for Bush Stone-curlew where the bird is found on roadsides.	Council/CMA	2009	
9	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	2007	Number of people Attending training courses
10	Make this strategy and handbooks available to individuals and organisations.	Council	2007	Number of copies distributed
11	Review the extent and effectiveness of the existing firebreak network in the MFPP. This review to consider the conservation significance of native vegetation, locations of threatened flora and fauna, alternative locations (including adjacent property), alternative fuel reduction measures (eg strategic grazing or haymaking), weeds and CFA Roadside Management guidelines.	MFPO/ MFPC/CFA	2007/08	Review completed
12	Monitor the implementation of this strategy and conduct 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.	Council	Annual	Implementation monitored, audits undertaken and guidelines being followed
13	Council policy documents should be consistent and give appropriate consideration to roadside vegetation.	Council	Ongoing	
14	Undertake field days for landowners regarding legal obligations, plant identification and appropriate management activities.	DSE/ DPI/Council and Landcare	Ongoing	Number of field days held and community numbers attending
15	Consult with key stakeholders and community regarding pest plant and animal management along roadsides.	DPI/DSE and Landcare	Ongoing	
16	Work with other agencies including Landcare Groups to identify strategic locations for revegetation or native vegetation enhancement on road reserves.	Council/CMA/ DSE/ Wimmera Farm Tree Group	Ongoing	New plantings and enhancements of road reserves
17	Review this strategy.	Council	Annually	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 the Victoria.
Victoria's Native Vegetation Management – A Framework for Action 2003	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>Aboriginal Heritage Act 2006</p> <p>Heritage Act 1995</p> <p>Coroners Act 1985</p>	<p>Provides for protection Aboriginal relics and sites on roadsides through a system of Aboriginal Cultural Heritage permits, management plans and agreements.</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 driving 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 West Wimmera Shire area.

West Wimmera Land Use Strategy (1998)
West Wimmera Shire Council Road Management Plan (2004)
West Wimmera Shire Council Planning Scheme
West Wimmera Shire Council Municipal Strategic Statement (2000)
West Wimmera Shire Council Plan (2005-2009)
West Wimmera Shire Council Municipal Fire Prevention Plan (2003)
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 (2000)
Wimmera Weed Action Plan (2000-2005)
Glenelg Regional Catchment Strategy (2003)
Glenelg Regional Landcare Plan (1993)
Glenelg Hopkins Salinity Strategy (2004)
Glenelg Hopkins Catchment Management Authority draft Native Vegetation Plan (2000)
Glenelg-Hopkins Weed Action Plan (2001-2004)
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)
LCC Special Investigation South Western Victoria final Recommendations (1997)

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

- Planning Practice Notes - Department of Sustainability and Environment, 2006.
- 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.

In order to minimise planning permit applications for native vegetation removal associated with roadworks, a Memorandum of Understanding (MoU) could be implemented to establish a clearance template.

It is recommended that:

- Council recommence negotiations with DSE to implement a Memorandum of Understanding for a clearance template for removal of native vegetation for road construction and maintenance activities to minimise planning permit applications.

3.2 Offsets

Under the provisions of the West Wimmera planning scheme, a condition of permits being issued will be that any vegetation loss will be offset as required by the Native Vegetation Framework, according to the Net Gain principles outlined in the Planning Practice Notes.

3.3 Overlays to the Planning Scheme

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. The following overlays currently apply to roadsides:

- VPO1 Jumping Jack Wattle – Roadside Protection and Conservation
- ESO1 Watercourses, Waterbodies and Wetlands Protection Areas
- ESO2 Red-tailed Black Cockatoo Habitat Areas

Where it is considered appropriate by West Wimmera Shire:

- a VPO may be incorporated into the West Wimmera planning scheme to protect native vegetation on high conservation roadsides.
- Consider protection for biolinks on roadsides where they are established in strategic locations with local provenance species.
- Consider protection of areas of the Bush Stone-curlew on roadsides.

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 Councils 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.

Council in conjunction with or after consultation with MFPC shall review the extent and effectiveness of the strategic firebreak network in relation to the conservation significance and the CFA Roadside Management guidelines. Council recognises existing firebreaks on road reserves maintained by landowners for protection of their property

Land Subdivisions and Developments

- Refer to Vegetation Protection Overlay and Environmental Significance Overlays.
- 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 native vegetation over 10 years old that is 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 (eg maintenance pruning).

It is recommended that Council obtain approval from DSE for a maintenance clearance template or code of practice, which will reduce the need for individual permits to undertake maintenance pruning operations.

- 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.
 - Perform emergency activities such as clearing storm-damaged trees.
- Vegetation Protection and Environmental Significance Overlays place additional permit requirements for vegetation removal associated with road construction, widening and maintenance.
- Include 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 prepared by the relevant service authority 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 Council 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.
- The Shire may be contacted to determine whether the exemptions apply.

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.

Revegetation

Landcare activities are encouraged on roadsides where they contribute to protection and enhancement of biodiversity values.

- Permission by Council and adjoining landowners 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.
- Plantings must be setback 9 metres from the centre of the road, 4 metres from fences, 10 metres from gates and 80 metres from intersections.
- Plans for any revegetation project must be submitted to the Council at least two months prior to works, then referred to the relevant authorities.
- Plans must comply with this strategy and the *West Wimmera 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).
- Revegetation shall not be undertaken in MFPP listed strategic firebreaks.

It is recommended that:

- Landcare groups are encouraged to continue their involvement in revegetation on roadsides.
- Landcare groups are encouraged to 'adopt' particular roadsides for ongoing involvement in management.

Stock Movement

Movement of stock on local roads shall be in accordance with Council's Local Law Number 2.

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.
- To minimize impacts, 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

- Cropping is not permitted on roadsides. Where roadside vegetation has been totally modified to pasture grasses (and therefore is of low conservation value), haymaking may be acceptable providing approval is obtained from the Shire.

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.

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 West Wimmera 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.
- Where possible, ensure that runoff is not directed straight into wetlands. Road discharge should be treated by filtering through native vegetation to reduce erosion and potential pollution problems.
- Wetlands and waterways are to be protected by appropriate works practices, including herbicide usage.

Seed Collection

- Seed collection and removal of propagation material (eg cuttings) on roadsides requires planning approval under the Planning and Environment Act.
- 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.

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 majority of the West Wimmera Shire Council is located in the Wimmera CMA, with a small section of the southern area of the Shire in the Glenelg-Hopkins CMA and a small section of the northern area in the Mallee CMA.

In relation to Native Vegetation Management on roadsides, where deemed appropriate Council 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.
- Coordinate delivery of State and Federal programs as appropriate.
- Assist other agencies (such as DPI, DSE and CMAs) to improve management of roadside vegetation.

4.2 Threatening Processes to Roadside Native Vegetation

There are a number of threats to roadside native vegetation and the purpose of this strategy is to minimise those threats where appropriate.

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.

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 or Farm Tree 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 propounded by the West Wimmera Farm Tree Group 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 the RCAC method) to determine the quality of native vegetation present. The Wimmera 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 Ecological Vegetation Class conservation significance be incorporated with the existing conservation value maps of roadsides. 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 appropriate advisory signage on roads that have high numbers of native fauna road kills.
- Manage roadsides to reduce threats to native fauna. (eg minimizing inappropriate firewood collection)

Red-tailed Black Cockatoo



Listed as endangered nationally and as threatened in Victoria. Distribution in Victoria is restricted to West of the state. Populations have been severely reduced in numbers to about 1000 individuals and not more than 100 breeding pairs due to clearing of habitat. The Red-tailed Black Cockatoo uses different habitat for nesting, feeding and roosting. Nesting habitat occurs mainly on private land in old Red Gums.

Feeding habitat of Brown Stringybarks occur predominantly on public land. Bulokes are also important for feeding, with nearly all regeneration occurring on roadsides.

Currently hollow trees are gradually being lost through death, decay, firewood harvesting, wildfire and agricultural activities. Complementary management of habitat and development of corridors on both private and public land would assist in ensuring long-term survival.

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 West Wimmera 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.

Jumping-jack Wattle (*Acacia enterocarpa*) and Hairy-pod Wattle (*Acacia glandulicarpa*)

Jumping-jack Wattle endangered nationally and threatened in Victoria. Its' distribution is restricted to the Diapur and Kaniva area. Hairy-pod Wattle is listed as vulnerable both nationally and in Victoria. Its' distribution is restricted to the southern Wimmera, south-west Horsham to north of Nhill. Road reserves are very important for the survival of both these species. Threats to these species include roadworks and maintenance, installation of services, rabbit browsing and ripping of warrens. A Vegetation Protection Overlay that seeks to identify and protect populations of Jumping-jack Wattle on roadsides has been incorporated into the West Wimmera planning scheme. Additional permit requirements apply under this overlay.

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. In some instances, 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 Old Remnant Trees

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

Scattered large old remnant trees are both significant biodiversity assets and features of the West Wimmera 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.

Guidelines:

- Ensure that these trees within roadsides 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 within roadsides 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 on roadsides.
- 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 safe passage of road users.*

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 clearance templates when approved, 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 best practice for biodiversity management.
- Road design should minimize vegetation removal.
- Planning permits are required for any native vegetation clearance associated with new roads.
- 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.
 - Application of appropriate speed limits for road classification and conditions.
 - 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 maximize 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:

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

Native Vegetation Management

Planning permits are required for removal of native vegetation subject to the provisions of the local planning scheme, the Native Vegetation Framework and the Planning Practice Notes.

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:
 - Vegetation Protection Overlay.
 - Environmental Significance Overlays.
 - 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 are rabbits, foxes and feral cats. 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.

Noxious weeds are plants that are legally declared to be a serious threat and economic cost to agriculture and the environment.

Environmental weeds are plants that invade areas of natural bushland. Environmental weeds include both introduced plants and native plants that originally come from other areas of Australia.

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 Glenelg-Hopkins, 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 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 West Wimmera Shire, the communities that preside over Aboriginal sites are Brambuk Incorporated, Goolum Goolum Aboriginal Cooperative Ltd., and Winda Mara 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 through Native Title Services Victoria 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.
- 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

Council gives its commitment to establish best roadside works practices as the norm.

Formal staff training in environmental care should be undertaken 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.
- 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 training and follow the works practices in the Environmental Code of Practice Handbook 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.

Planning staff

Staff need to be competent in the above topics, but additional skills are required to implement the Native Vegetation Framework and the DSE Planning Practice Notes.

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
- Adherence to the principles outlined in the Environmental Code of Practice Handbook

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 Edenhope, Goroke and Kaniva to gain further input to the process. A list of issues, comments and suggested solutions raised at these meetings is presented below.

General

- increased traffic volumes leading to wider formation widths within existing road reserves is environmentally unsustainable for both flora and fauna
- roads are primarily for traffic, access, stock and machinery movement
- roads have strong aesthetic and amenity values
- increasing farm machinery width requires wider roads for access
- alternative routes through private property or designated routes should be considered for farm machinery
- last remnants of native vegetation are all the more important because of their rarity
- we are losing biodiversity through current management practices
- understorey vegetation is the most vulnerable to damage
- there is a need to enhance existing low and medium conservation value roadsides
- lack of awareness of protected species eg native grasses
- roads are a high risk environment to which to attract animals
- roadkill has increased with traffic volumes
- native vegetation regenerates after disturbance
- regeneration is restricted in Phalaris areas
- road safety has been compromised by tree encroachment
- high cost of establishing clear zones with either guardrail or tree removal
- Prickly Acacia presents problems when it grows through fences
- cheap and expedient works practices are not best practice – do whole-life costings eg long-term weed invasion as result of spraying
- cost shifting where council introduces weeds but landowner responsible for control
- rate reductions should be considered for conservation covenants / corridors on private land
- West Wimmera has some of the best roadside vegetation in the state
- Telopea Downs vegetation is unhealthy – unknown cause - drought, lack of burning, pathogens
- natural water flows, especially into wetlands, have been adversely affected by road construction
- telecommunication cables inhibit rabbit ripping operations

Road construction

- wider roads and drains particularly impact on native grasslands
- 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
- increasing width of farm machinery
- gravel extraction leads to weed spread

Road maintenance

- grading progressively widens roads, removing shrubs and damaging tree roots
- 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 and in table drains
- grading operations aid weed dispersal – mapping of weed areas may assist
- identify process for operators to report on observed weed infestations
- templates are required for lopping of trees
- tree trimming program needs to be better managed
- Council spends \$50,000pa on tree trimming
- tree trimming program is way behind on smaller roads
- parking, turning and material storage cause greatest off road damage
- clear guidelines should be established through RMS process for works procedures, equipment operation
- rocks and windrows impede slashing and encourage weeds and rabbits – on site crushers have been introduced at pits to minimize rock spillage on roadsides
- grader drivers unaware of vegetation issues – rare plants have been removed
- native vegetation has been pushed up into heaps
- native grasses get smothered by windrows
- windrows have been pushed up against fences

Roadside management

- droving has substantially lessened over the last decade
- droving at suitable times is a good fuel reduction measure especially with phalaris
- adopt risk analysis approach to assess droving/grazing applications – timing / weeds / regeneration / fuel load
- grazing has destroyed regenerating trees and shrubs in the past – good tree regeneration since droving reduced
- firewood collection removes fuel load for wildfire
- firewood collection destroys natural habitat
- vermin control causes damage

Revegetation activities

- tree planting on roadsides is inappropriate
- trees should not be planted on strategic firebreaks
- tree plantings have occurred under powerlines and close to road, gates and intersections
- suggested clearances are 10m gates, 80m intersections, 9m roads, 4m fences
- tree plantings can reduce fire access
- trees on roadsides are incompatible with stock movement
- tree plantings should always use indigenous local provenance stock, certainly not Pines
- emphasis should be on developing linkages with existing remnants, not isolated patches
- risk assessments should be undertaken on proposed plantings
- 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 – strategic corridor linkages
- how are levels of offset plantings established
- offsets should be targeted at unused road reserves

Community awareness

- most people are unaware of the significance of native vegetation
- people are wary of doing any vegetation management for fear of doing the wrong thing
- prosecutions have occurred in other shires for inappropriate vegetation clearance
- a major aspect of improved roadside management will be community education in the long term – What are we allowed to do?
- 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
- what do we want on roadsides?
- lack of community consultation, information
- should use local knowledge

Legal obligations

- landowners responsibilities under the CaLP Act on local roads – weed control and rabbits
- requirement for permits to remove, lop or destroy native vegetation
- people seem unaware that permit requirements apply to shrubs and grasses
- status of Prickly Acacia
- permit requirements for moving stock
- falling timber on fences
- vegetation clearance allowed for fences – 1m, 2m
- grazing on roads – status of unused road reserves
- dangerous trees

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 is no monitoring of ploughed / graded breaks
- difficulty in getting volunteers and machinery for ploughed breaks
- grazing with cattle to reduce fuel load good especially for areas with phalaris
- MFPP breaks must be maintained
- CFA needs to review strategic firebreak network – effectiveness / extent
- lack of fire access - especially strategic east west roads – clear trees and gravel surface
- expectation is for council to toughen up on ploughed breaks
- spraying leads to infestation of more virulent weeds

- long-term spraying will encourage herbicide resistance
- Council spray program is done too late – fuel load already established
- lack of available personnel to continue roadside burning especially at harvest time when grasses cured
- autumn burning may have to be introduced
- burning is the most effective firebreak
- fallen timber on roadsides restricts access for fire crews
- roadside burning has diminished over past few years
- difficult to burn once phalaris is established, phalaris presents greater fire risk and fuel load especially under trees
- phalaris can be held in check with regular burning
- 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?
- Prickly Acacia is presenting fire risk, vermin harbour
- tree clearance should be maintained to allow fire vehicle access
- irrigated areas are far less fire prone

Weed management

- Council works spread noxious weeds especially with grading
- adjacent landowners responsibility for weeds on road reserve
- farm transport spreads weeds
- impact on economic return within region
- Landcare groups have historically had a weed focus
- Gorse, Wild Turnip, Oxalis, Phalaris, Bridal Creeper, Cape Tulip, Prickly Acacia, Patterson's Curse, Gazania, Bathurst burr, Blackberry, Veldt grass, South African Weed Orchid and Nut Grass cited as major problems
- Serrated Tussock an emerging weed in shire
- lack of council involvement in weed eradication activities
- increasing number of summer growing weeds as a result of herbicide spraying
- some weeds are establishing because of dumping of garden refuse on roadsides

Suggested solutions

- have management plans for high conservation roadsides
- education required as to effects of disturbance
- training for council staff, DSE, DPI, contractors and utilities on native vegetation issues
- provide Council staff with conservation maps of roadsides
- training for general public on identification of native vegetation
- set policy on firewood collection
- clear definition of landholder's responsibilities – native vegetation, weed control - publicise
- cooperation between council and utilities if weeds created by disturbance
- regular maintenance program to control weeds at stockpiles
- rocks and windrows should not be left on roadsides after works - impedes future slashing – spoil may be relocated to private land
- Council will level old windrows if requested, especially for fence construction
- fire prevention policy should clearly stipulate width and methods – plough, spray, mow, graze, burn
- grazing should be encouraged to reduce roadside fuel in Phalaris and Cocksfoot areas
- mosaic burning appropriate where Prickly Acacia rampant
- autumn burning preferable for fuel reduction
- DSE may be able to assist with some fuel reduction burns
- existing ploughed breaks to be maintained
- identify and map priority areas for weed control
- identify process for Council workers to notify Landcare personnel of observed weed problems
- identify and map areas for habitat / biolink enhancement
- education needed – inappropriate plantings on firebreaks – location, species, strategic revegetation
- checklist 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 native vegetation values in general community – seen as a negative in farming
- community education in recognizing native vegetation especially native grasses
- community should convey known locations of rare species to Council and DSE
- consult with adjoining landowners
- promote best practice with herbicides
- clarify funding / cost sharing for rabbit control
- 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
- cease purchase of road gravel from pits with known white snail problems
- offset plantings require monitoring over long period to ensure that they are successful
- natural overland flows should be maintained through use of culverts

Appendix 2 – Significant Fauna and Flora in West Wimmera 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
f		e	Australasian Bittern	<i>Botaurus poiciloptilus</i>	Ardeidae
		v	Australasian Shoveler	<i>Anas rhynchotis</i>	Anatidae
f		c	Australian Bustard	<i>Ardeotis australis</i>	Otididae
		n	Azure Kingfisher	<i>Alcedo azurea</i>	Alcedinidae
f		v	Baillon's Crake	<i>Porzana pusilla</i>	Rallidae
f		v	Bardick	<i>Echiopsis curta</i>	Elapidae
		v	Black Falcon	<i>Falco subniger</i>	Falconidae
		n	Black-chinned Honeyeater	<i>Melithreptus gularis</i>	Meliphagidae
		n	Black-eared Cuckoo	<i>Chrysococcyx osculans</i>	Cuculidae
f		e	Blue-billed Duck	<i>Oxyura australis</i>	Anatidae
f		v	Brolga	<i>Grus rubicunda</i>	Gruidae
		n	Brown Quail	<i>Coturnix ypsilophora</i>	Phasianidae
		e	Brown Toadlet	<i>Pseudophryne bibronii</i>	Myobatrachidae
		n	Brown Treecreeper	<i>Climacteris picumnus</i>	Climacteridae
f		v	Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>	Dasyuridae
f		e	Bush Stone-curlew	<i>Burhinus grallarius</i>	Burhinidae
f		v	Chestnut-rumped Heathwren	<i>Hylacola pyrrhopygia</i>	Pardalotidae
		v	Common Dunnart	<i>Sminthopsis murina</i>	Dasyuridae
f		n	Crested Bellbird	<i>Oreoica gutturalis</i>	Pachycephalidae
f		n	Diamond Dove	<i>Geopelia cuneata</i>	Columbidae
f		v	Diamond Firetail	<i>Stagonopleura guttata</i>	Passeridae
		d	Eastern Bearded Dragon	<i>Pogona barbata</i>	Agamidae
		v	Elegant Parrot	<i>Neophema elegans</i>	Psittacidae
		n	Fat-tailed Dunnart	<i>Sminthopsis crassicaudata</i>	Dasyuridae
f		d	Fly-specked Hardyhead (southern form)	<i>Craterocephalus stercusmuscarum fulvus</i>	Atherinidae
f		e	Freckled Duck	<i>Stictonetta naevosa</i>	Anatidae
		n	Glossy Ibis	<i>Plegadis falcinellus</i>	Threskiornithidae
		v	Golden Perch	<i>Macquaria ambigua</i>	Percichthyidae
f		v	Great Egret	<i>Ardea alba</i>	Ardeidae
f	V	v	Greater Long-eared Bat	<i>Nyctophilus timoriensis</i>	Vespertilionidae
		v	Grey Goshawk	<i>Accipiter novaehollandiae</i>	Accipitridae
		n	Grey Plover	<i>Pluvialis squatarola</i>	Charadriidae
f		e	Grey-crowned Babbler	<i>Pomatostomus temporalis</i>	Pomatostomidae
f	V	e	Growling Grass Frog	<i>Litoria raniformis</i>	Hylidae
		v	Hardhead	<i>Aythya australis</i>	Anatidae
f	V	n	Heath Mouse	<i>Pseudomys shortridgei</i>	Muridae
f		n	Hooded Robin	<i>Melanodryas cucullata</i>	Petroicidae
f		c	Intermediate Egret	<i>Ardea intermedia</i>	Ardeidae
f		r	Large Ant Blue	<i>Acrodipsas brisbanensis</i>	Lycaenidae
		n	Latham's Snipe	<i>Gallinago hardwickii</i>	Scolopacidae
f		e	Little Bittern	<i>Ixobrychus minutus</i>	Ardeidae
		n	Little Button-quail	<i>Turnix velox</i>	Turnicidae

FFG	EPBC	VROTS	Common Name	Scientific Name	Family Name
f		e	Little Egret	<i>Egretta garzetta</i>	Ardeidae
		n	Little Pygmy-possum	<i>Cercartetus lepidus</i>	Burramyidae
		v	Magpie Goose	<i>Anseranas semipalmata</i>	Anseranatidae
f		v	Major Mitchell's Cockatoo	<i>Cacatua leadbeateri</i>	Cacatuidae
f	V	e	Malleefowl	<i>Leipoa ocellata</i>	Megapodiidae
f		e	Masked Owl	<i>Tyto novaehollandiae</i>	Tytonidae
		n	Mitchell's Hopping-mouse	<i>Notomys mitchelli</i>	Muridae
f			Mountain Galaxias	<i>Galaxias olidus</i>	Galaxiidae
f	V	e	Murray Cod	<i>Maccullochella peelii peelii</i>	Percichthyidae
		v	Musk Duck	<i>Biziura lobata</i>	Anatidae
		n	Nankeen Night Heron	<i>Nycticorax caledonicus</i>	Ardeidae
		n	Pectoral Sandpiper	<i>Calidris melanotos</i>	Scolopacidae
		n	Pied Cormorant	<i>Phalacrocorax varius</i>	Phalacrocoracidae
f		v	Port Lincoln Snake	<i>Suta spectabilis</i>	Elapidae
f		v	Powerful Owl	<i>Ninox strenua</i>	Strigidae
		v	Purple-gaped Honeyeater	<i>Lichenostomus cratitius</i>	Meliphagidae
f	E	e	Red-tailed Black-Cockatoo	<i>Calyptorhynchus banksi</i>	Cacatuidae
f	E	c	Regent Honeyeater	<i>Xanthomyza phrygia</i>	Meliphagidae
f	V	v	Regent Parrot	<i>Polytelis anthopeplus</i>	Psittacidae
f		v	Rosenberg's Goanna	<i>Varanus rosenbergi</i>	Varanidae
		v	Royal Spoonbill	<i>Platalea regia</i>	Threskiornithidae
f		e	Samphire Skink	<i>Morethia adelaidensis</i>	Scincidae
		r	Sciron Skipper	<i>Trapezites sciron eremicola</i>	Hesperiidae
		n	Silky Mouse	<i>Pseudomys apodemoides</i>	Muridae
f		n	Slender-billed Thornbill	<i>Acanthiza iredalei</i>	Pardalotidae
f		e	Small Brown Azure	<i>Ogyris otales</i>	Lycaenidae
	E	n	Southern Brown Bandicoot	<i>Isodon obesulus obesulus</i>	Peramelidae
		v	Southern Toadlet	<i>Pseudophryne semimarmorata</i>	Myobatrachidae
		n	Spotted Harrier	<i>Circus assimilis</i>	Accipitridae
f		n	Striped Worm-Lizard	<i>Aprasia striolata</i>	Pygopodidae
f	E	c	Trout Cod	<i>Maccullochella macquariensis</i>	Percichthyidae
f	V	e	Variiegated Pigmy Perch	<i>Nannoperca variegata</i>	Kuhliidae
		d	Western Blue-tongued Lizard	<i>Tiliqua occipitalis</i>	Scincidae
		n	Western Pygmy-possum	<i>Cercartetus concinnus</i>	Burramyidae
f	V	c	Western Whipbird	<i>Psophodes nigrogularis</i>	Cinclosomatidae
		n	Whiskered Tern	<i>Chlidonias hybridus</i>	Laridae
f		v	White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	Accipitridae
		v	Wood Sandpiper	<i>Tringa glareola</i>	Scolopacidae
f	V	n	Yarra Pigmy Perch	<i>Nannoperca obscura</i>	Kuhliidae

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
		r	<i>Acacia cupularis</i>	Cup Wattle	Mimosaceae
f	E	e	<i>Acacia enterocarpa</i>	Jumping-jack Wattle	Mimosaceae
		k	<i>Acacia farinosa</i>	Mealy Wattle	Mimosaceae
f	V	v	<i>Acacia glandulicarpa</i>	Hairy-pod Wattle	Mimosaceae

FFG	EPBC	VROTS	Scientific Name	Common Name	Family Name
		r	<i>Acacia lineata</i>	Streaked Wattle	Mimosaceae
		r	<i>Acacia rupicola</i>	Rock Wattle	Mimosaceae
		r	<i>Acacia simmonsiana</i>	Desert Manna Wattle	Mimosaceae
f			<i>Allocasuarina luehmannii</i>	Buloke	Casuarinaceae
		k	<i>Allocasuarina mackliniana</i>	Western Sheoak	Casuarinaceae
		k	<i>Allocasuarina mackliniana</i> subsp. <i>mackliniana</i>	Western Sheoak	Casuarinaceae
		k	<i>Allocasuarina mackliniana</i> subsp. <i>xerophila</i>	Western Sheoak	Casuarinaceae
	V		<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	Poaceae
		v	<i>Amyema linophylla</i> subsp. <i>orientale</i>	Buloke Mistletoe	Loranthaceae
		r	<i>Asperula wimmerana</i>	Wimmera Woodruff	Rubiaceae
f	V	v	<i>Asterolasia phebaloides</i>	Downy Star-Bush	Rutaceae
		r	<i>Austrodanthonia monticola</i>	Small-flower Wallaby-grass	Poaceae
		r	<i>Austrostipa macalpinei</i>	Annual Spear-grass	Poaceae
		r	<i>Austrostipa mundula</i>	Neat Spear-grass	Poaceae
		r	<i>Austrostipa puberula</i>	Fine-hairy Spear-grass	Poaceae
		r	<i>Austrostipa trichophylla</i>	Spear-grass	Poaceae
		v	<i>Boronia filifolia</i>	Slender Boronia	Rutaceae
		v	<i>Boronia pilosa</i> subsp. <i>parvidaemonis</i>	Desert Boronia	Rutaceae
		r	<i>Brachyscome readeri</i>	Reader's Daisy	Asteraceae
		k	<i>Caladenia dilatata</i> s.s.	Green-comb Spider-orchid	Orchidaceae
f	V	v	<i>Caladenia formosa</i>	Elegant Spider-orchid	Orchidaceae
		e	<i>Caladenia fragrantissima</i> subsp. <i>fragrantissima</i>	Scented Spider-orchid	Orchidaceae
	V	r	<i>Caladenia omata</i>	Ornate Pink-fingers	Orchidaceae
		v	<i>Caladenia stricta</i>	Upright Spider-orchid	Orchidaceae
	E	v	<i>Caladenia tensa</i>	Rigid Spider-orchid	Orchidaceae
		r	<i>Caladenia venusta</i>	Large White Spider-orchid	Orchidaceae
	V	v	<i>Callitriche cyclocarpa</i>	Western Water-starwort	Callitrichaceae
		r	<i>Calotis cuneifolia</i>	Blue 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>Choretrum glomeratum</i>	Common Sour-bush	Santalaceae
		r	<i>Choretrum glomeratum</i> var. <i>chrysanthum</i>	Golden Sour-bush	Santalaceae
		r	<i>Choretrum glomeratum</i> var. <i>glomeratum</i>	Common Sour-bush	Santalaceae
		r	<i>Choretrum spicatum</i>	Spiked Sour-bush	Santalaceae
f		v	<i>Comesperma polygaloides</i>	Small Milkwort	Polygalaceae
		r	<i>Corybas X miscellus</i>	Veined x Slaty Helmet-orchid hybrid	Orchidaceae
		v	<i>Cyperus flaccidus</i>	Lax Flat-sedge	Cyperaceae
		v	<i>Darwinia micropetala</i>	Small Darwinia	Myrtaceae
		r	<i>Daviesia genistifolia</i> s.s.	Broom Bitter-pea	Fabaceae
		r	<i>Daviesia pectinata</i>	Thorny Bitter-pea	Fabaceae
		r	<i>Dianella callicarpa</i>	Swamp Flax-lily	Phormiaceae
		r	<i>Dichondra</i> sp. 1	Silky Kidney-weed	Convolvulaceae
		r	<i>Dillwynia uncinata</i>	Silky Parrot-pea	Fabaceae
		e	<i>Dipodium campanulatum</i>	Bell-flower Hyacinth-orchid	Orchidaceae
	V	v	<i>Dodonaea procumbens</i>	Trailing Hop-bush	Sapindaceae
		k	<i>Eleocharis macbarronii</i>	Grey Spike-sedge	Cyperaceae
		k	<i>Eleocharis pallens</i>	Pale Spike-sedge	Cyperaceae
		v	<i>Eragrostis lacunaria</i>	Purple Love-grass	Poaceae
		r	<i>Eremophila gibbifolia</i>	Coccid Emu-bush	Myoporaceae
f	E	e	<i>Eriocaulon australasicum</i>	Southern Pipewort	Eriocaulaceae

FFG	EPBC	VR0TS	Scientific Name	Common Name	Family Name
		r	<i>Eriochlamys behrii</i> s.l.	Woolly Mantle	Asteraceae
		e	<i>Eucalyptus calycogona</i> subsp. <i>calycogona</i>	Red Mallee	Myrtaceae
		v	<i>Eucalyptus fasciculosa</i>	Pink Gum	Myrtaceae
f		r	<i>Eucalyptus froggattii</i>	Kamarooka Mallee	Myrtaceae
		v	<i>Eucalyptus macmahonii</i>	Scaly-cap Mallee	Myrtaceae
		e	<i>Eucalyptus molyneuxii</i>	Little Desert Peppermint	Myrtaceae
		r	<i>Eucalyptus phenax</i>	Green-leaf Mallee	Myrtaceae
		r	<i>Eucalyptus sabulosa</i>	Wimmera Scentbark	Myrtaceae
		v	<i>Eucalyptus silvestris</i>	Woodland Box	Myrtaceae
		r	<i>Eucalyptus wimmerensis</i>	Wimmera Mallee-box	Myrtaceae
		r	<i>Euphrasia collina</i> subsp. <i>tetragona</i>	Purple Eyebright	Scrophulariaceae
		r	<i>Galium curvihirtum</i>	Tight Bedstraw	Rubiaceae
		k	<i>Glossostigma drummondii</i>	Desert Mud-mat	Scrophulariaceae
f	V	v	<i>Glycine latrobeana</i>	Clover Glycine	Fabaceae
		r	<i>Gnephosis drummondii</i>	Slender Cup-flower	Asteraceae
		r	<i>Goodenia benthamiana</i>	Small-leaf Goodenia	Goodeniaceae
		r	<i>Goodia medicaginea</i>	Western Golden-tip	Fabaceae
		r	<i>Gratiola pumilo</i>	Dwarf Brooklime	Scrophulariaceae
		v	<i>Haloragis myriocarpa</i>	Prickly Raspwort	Haloragaceae
		r	<i>Helichrysum adenophorum</i> var. <i>adenophorum</i>	Branched Everlasting	Asteraceae
		r	<i>Hibbertia humifusa</i>	Rising Star Guinea-flower	Dilleniaceae
	V	v	<i>Hibbertia humifusa</i> subsp. <i>debilis</i>	Dergholm Guinea-flower	Dilleniaceae
		r	<i>Hibbertia sericea</i> var. <i>scabrifolia</i>	Silky Guinea-flower	Dilleniaceae
		v	<i>Hibbertia sessiliflora</i>	Heathy Guinea-flower	Dilleniaceae
		v	<i>Hydrorchis orbicularis</i>	Swamp Onion-orchid	Orchidaceae
		k	<i>Isolepis australiensis</i>	Inland Club-sedge	Cyperaceae
f		v	<i>Isolepis congrua</i>	Slender Club-sedge	Cyperaceae
		k	<i>Lachnagrostis filiformis</i> var. 2	Wetland Blown-grass	Poaceae
f		r	<i>Lachnagrostis punicea</i> subsp. <i>filifolia</i>	Purple Blown-grass	Poaceae
		r	<i>Lachnagrostis punicea</i> subsp. <i>punicea</i>	Purple Blown-grass	Poaceae
		r	<i>Lachnagrostis scabra</i>	Ruddy Blown-grass	Poaceae
		r	<i>Lepidosperma canescens</i>	Hoary Rapier-sedge	Cyperaceae
		v	<i>Lepilaena patentifolia</i>	Spreading Water-mat	Zannichelliaceae
		v	<i>Leptorhynchos waitzia</i>	Button Immortelle	Asteraceae
		r	<i>Leucopogon virgatus</i> var. <i>brevifolius</i>	Common Beard-heath	Epacridaceae
		r	<i>Leucopogon woodsii</i>	Nodding Beard-heath	Epacridaceae
		v	<i>Levenhookia pusilla</i>	Midget Stylewort	Stylidiaceae
		v	<i>Lipocarpa microcephala</i>	Button Rush	Cyperaceae
		r	<i>Lomandra micrantha</i> subsp. <i>tuberculata</i>	Small-flower Mat-rush	Xanthorrhoeaceae
f		v	<i>Melaleuca halmaturorum</i> subsp. <i>halmaturorum</i>	Salt Paperbark	Myrtaceae
		r	<i>Mimulus prostratus</i>	Small Monkey-flower	Scrophulariaceae
		r	<i>Muehlenbeckia horrida</i> subsp. <i>horrida</i>	Spiny Lignum	Polygonaceae
		r	<i>Olearia minor</i>	Satin Daisy-bush	Asteraceae
		v	<i>Olearia picridifolia</i>	Rasp Daisy-bush	Asteraceae
		v	<i>Olearia suffruticosa</i>	Clustered Daisy-bush	Asteraceae
		k	<i>Pelargonium littorale</i>	Coast Stork's-bill	Geraniaceae
	V	v	<i>Phebalium lowanense</i>	Lowan Phebalium	Rutaceae
		r	<i>Phebalium stenophyllum</i>	Narrow-leaf Phebalium	Rutaceae
		r	<i>Phyllota remota</i>	Slender Phyllota	Fabaceae
		r	<i>Pimelea flava</i> subsp. <i>dichotoma</i>	Diosma Rice-flower	Thymelaeaceae
		r	<i>Poa drummondiana</i>	Knotted Poa	Poaceae
		r	<i>Pomaderris halmaturina</i> subsp. <i>continentis</i>	Glenelg Pomaderris	Rhamnaceae

FFG	EPBC	VROTS	Scientific Name	Common Name	Family Name
		x	Pomaderris obcordata	Pimelea Pomaderris	Rhamnaceae
		e	Prasophyllum sp. aff. occidentale C	Western Leek-orchid	Orchidaceae
		r	Pseudanthus ovalifolius	Oval-leaf Pseudanthus	Euphorbiaceae
f	V	k	Pterostylis aciculiformis	Slender Ruddyhood	Orchidaceae
		v	Pterostylis cheraphila	Floodplain Rustyhood	Orchidaceae
		r	Pterostylis dolichochila	Long-tongue Shell-orchid	Orchidaceae
		k	Pterostylis planulata s.l.	Flat Rustyhood	Orchidaceae
		r	Pterostylis smaragdina	Emerald-lip Greenhood	Orchidaceae
		r	Pterostylis sp. aff. plumosa (Woodland)	Woodland Plume-orchid	Orchidaceae
		k	Pterostylis tasmanica	Southern Plume-orchid	Orchidaceae
f			Ptilotus erubescens	Hairy Tails	Amaranthaceae
		v	Pultenaea acerosa	Bristly Bush-pea	Fabaceae
		r	Pultenaea daltonii	Hoary Bush-pea	Fabaceae
		r	Pultenaea densifolia	Dense Bush-pea	Fabaceae
		v	Pultenaea penna	Feather Bush-pea	Fabaceae
		r	Quinetia urvillei	Quinetia	Asteraceae
		k	Schoenus laevigatus	Short-leaf Bog-sedge	Cyperaceae
		r	Schoenus nanus	Tiny Bog-sedge	Cyperaceae
		r	Schoenus sculptus	Gimlet Bog-sedge	Cyperaceae
		r	Senecio cunninghamii var. cunninghamii	Branching Groundsel	Asteraceae
	V	v	Senecio psilocarpus	Swamp Fireweed	Asteraceae
		v	Senecio sp. aff. magnificus (North-west)	Tall Yellow-top	Asteraceae
		r	Sporadanthus tasmanicus	Branching Scale-rush	Restionaceae
f		e	Spyridium nitidum	Shining Spyridium	Rhamnaceae
	E	e	Spyridium sp. 1	Forked Spyridium	Rhamnaceae
		r	Styphelia exarrhena	Desert Styphelia	Epacridaceae
		v	Thelymitra azurea	Azure Sun-orchid	Orchidaceae
f	E	e	Thelymitra epipactoides	Metallic Sun-orchid	Orchidaceae
		r	Thelymitra luteocilium	Fringed Sun-orchid	Orchidaceae
		v	Thelymitra malvina	Mauve-tuft Sun-orchid	Orchidaceae
		v	Thelymitra mucida	Plum Orchid	Orchidaceae
		v	Thelymitra sp. aff. holmsii (South-west)	Blue-star Sun-orchid	Orchidaceae
		v	Thelymitra X chasmogama	Globe-hood Sun-orchid	Orchidaceae
		r	Thomasia petalocalyx	Paper Flower	Sterculiaceae
		v	Triglochin hexagona	Six-point Arrowgrass	Juncaginaceae
		r	Triglochin mucronata	Prickly Arrowgrass	Juncaginaceae
		k	Utricularia uniflora	Single Bladderwort	Lentibulariaceae
		r	Utricularia violacea	Violet Bladderwort	Lentibulariaceae
		r	Vittadinia cuneata var. morrisii	Fuzzy New Holland Daisy	Asteraceae
		v	Vittadinia megacephala	Giant New Holland Daisy	Asteraceae
f	E	e	Westringia crassifolia	Whipstick Westringia	Lamiaceae
		r	Xanthorrhoea caespitosa	Tufted Grass-tree	Xanthorrhoeaceae
		r	Xanthorrhoea semiplana subsp. semiplana	Yacca	Xanthorrhoeaceae
		r	Xanthosia leiophylla	Parsley Xanthosia	Apiaceae
		r	Zieria veronicea subsp. veronicea	Pink Zieria	Rutaceae

Appendix 3 - Key Weed Species in West Wimmera Shire

GHCMA – Glenelg Hopkins Catchment Management Authority

WCMA – Wimmera Catchment Management Authority

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>						GHCMA
South African Weed Orchid	<i>Monadenia bracteate</i>						WCMA
Bathurst Burr	<i>Xanthium spinosum</i>						WCMA/ MCMA
Blackberry	<i>Rubus fruticosus</i>						WCMA/ GHCMA
Blue Canary Grass	<i>Phalaris coerulescens</i>						GHCMA
Boneseed	<i>Chrysanthemoides monilifera</i>						MCMA
Boxthorn	<i>Lycium ferocissimum</i>						MCMA
Bridal Creeper	<i>Myrsiphyllum asparagoides</i>						GHCMA/ MCMA
Cape Broom	<i>Genista monspessulana</i>						WCMA
Cape Tulip	<i>Homeria sp.</i>						WCMA/ GHCMA
Chilean Needle Grass	<i>Nassella neesiana</i>						WCMA/ GHCMA
English Broom	<i>Cytisus scoparius</i>						
Gorse/Furze	<i>Ulex europeus</i>						GHCMA
Hardheads	<i>Acroptilon repens</i>						MCMA
Horehound	<i>Marrubium vulgare</i>						WCMA/ MCMA
Long-styled Feather Grass	<i>Pennisetum villosum</i>						WCMA
Nassella sp.	<i>Nassella sp.</i>						GHCMA
Paterson's Curse	<i>Echium plantagnifolium</i>						WCMA/ GHCMA
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>						GHCMA
Serrated Tussock	<i>Nassella trihotoma</i>						GHCMA
Silver-leaf Nightshade	<i>Solanum elaeagnifolium</i>						WCMA/ MCMA
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/ GHCMA
Wheel Cactus	<i>Opuntia robusta</i>						MCMA
Wild Garlic	<i>Allium vineale</i>						WCMA/ MCMA

Appendix 4 – Checklist for Tree Planting and Revegetation on Roadsides

Checklist for Revegetation	
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 (to be undertaken by person/groups undertaking planting).	
Plantings are compatible with planned biolinks	
Plantings to have a natural appearance (rows avoided).	
Shrubs and understorey species to be planted in dense clumps.	
Plantings are setback 9 metres from the centre of the road, 4 metres from fences, 10 metres from gates and 80 metres from intersections.	
Plantings under powerlines should be less than 3m tall.	
Plantings should not obscure traffic sight lines and visibility. Do not plant trees with a mature trunk diameter of 100mm at base within sight lines. Trees should be set back to the appropriate clear zone for the road (based on traffic speed, safety risk and traffic volume) as in the Vicroads Design Guidelines.	
Plantings shall not be undertaken in high conservation areas, except for infill plantings of significant or specific species, undertaken by people with suitable experience.	

West Wimmera Shire Roadside Conservation Status

Legend

- Major Wimmera Townships
- ▭ Wimmera CMA
- ▭ Local Government
- ▭ Major Roads
- Roadside Conservation Status
 - High
 - Medium
 - Low

