MANSFIELD SHIRE

MANSFIELD SHIRE COUNCIL

ROADSIDE CONSERVATION MANAGEMENT PLAN 2014

GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

This project received funding support from the Goulburn Broken Catchment Management Authority through the Commonwealth Natural Heritage Trust program

Australian Government

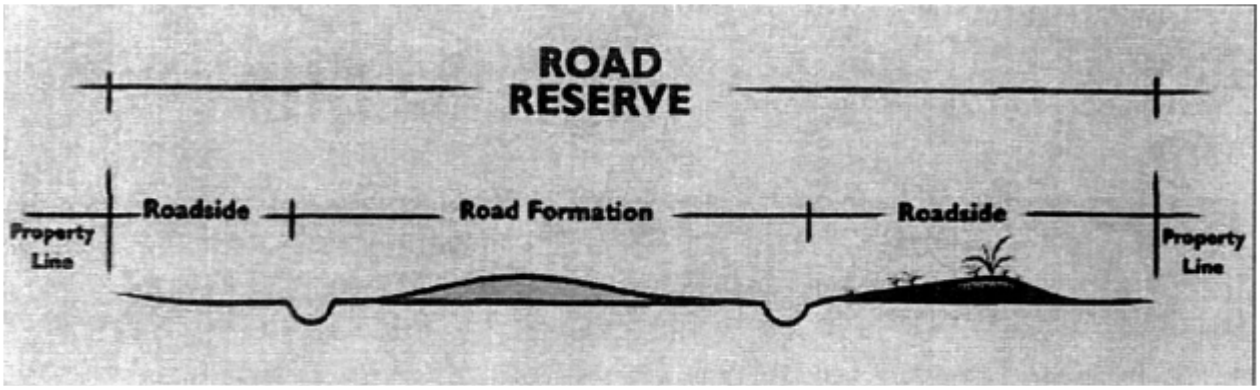
DOCUMENT CONTROL

Revision	Date	Reviewed by	Approved by	Revision details
Draft	2009	Suzie Healy	N/A	Amendments required
Revised draft	10/2013	Environment Advisory Committee	N/A	Amendments required
Revised draft	12/2013	Council staff	N/A	Amendments required
Revised draft	07/2014	Heather Bradbury	Council June 2014	

1.0 INTRODUCTION

1.1 What Is a Roadside?

A road reserve is established to provide a safe and effective network for vehicle movement and access for utility services. The roadside is usually the area between a property boundary and the road drain, as detailed in the diagram below.



Picture sourced from Patrick Connor and Murray Ralph, 2006, *Environmental Handbook for Roadsides*, Land Connect Australia

1.2 Why is Roadside Biodiversity Conservation Important?

The primary function of a road is to provide vehicle access routes for the transport of people, goods and services. Some roadsides also support high levels of biodiversity due to being undisturbed by adjoining land uses, such as agriculture, industry and residential areas. Therefore, biodiversity conservation has become another very important function of road reserves.

Roadside native vegetation often provides the only connectivity to other native vegetation remnants. They also support revegetation and restoration efforts in other land tenures. In the Goulburn Broken Catchment, there are flora species known only to remain on roadsides, and fauna that would otherwise not exist in some areas without roadside habitats.

1.3 How to Use the Plan

This Roadside Conservation Management Plan consists of three documents targeting particular users.

1. Roadside Conservation Management Plan:
   - Council's role in roadside management.
   - Objectives.
   - Principles of roadside conservation.
   - Roadside conservation value assessment.
   - Risks to roadside biodiversity.
   - Council responsibilities and procedures for management of roadside activities.
   - Implementation of the plan and associated actions.
2. Roadside Conservation Code of Practice Handbook for Field Services Staff and Contractors:
   - Addresses on-site procedural standards for road construction and maintenance projects for Council staff and contractors.
3. Community Roadside Handbook:
   - Contains information specific to the general Mansfield Shire community, including landholders, agencies and environment/Landcare groups.

1.4 What Area Does the Plan Cover?

The Plan includes all rural roads in Mansfield Shire for which Council is the Responsible Authority. Most roads within townships have not been included.

VicRoads are responsible for managing declared roads. These include, Maroondah Highway, Midland Highway, Midland Link, Mansfield-Woods Point Road, Mansfield-Whitfield Road, Mt Buller Road and part of Jamieson-Licola Road.

The Department of Environment and Primary Industries are responsible for managing most roads within National and State Park areas.

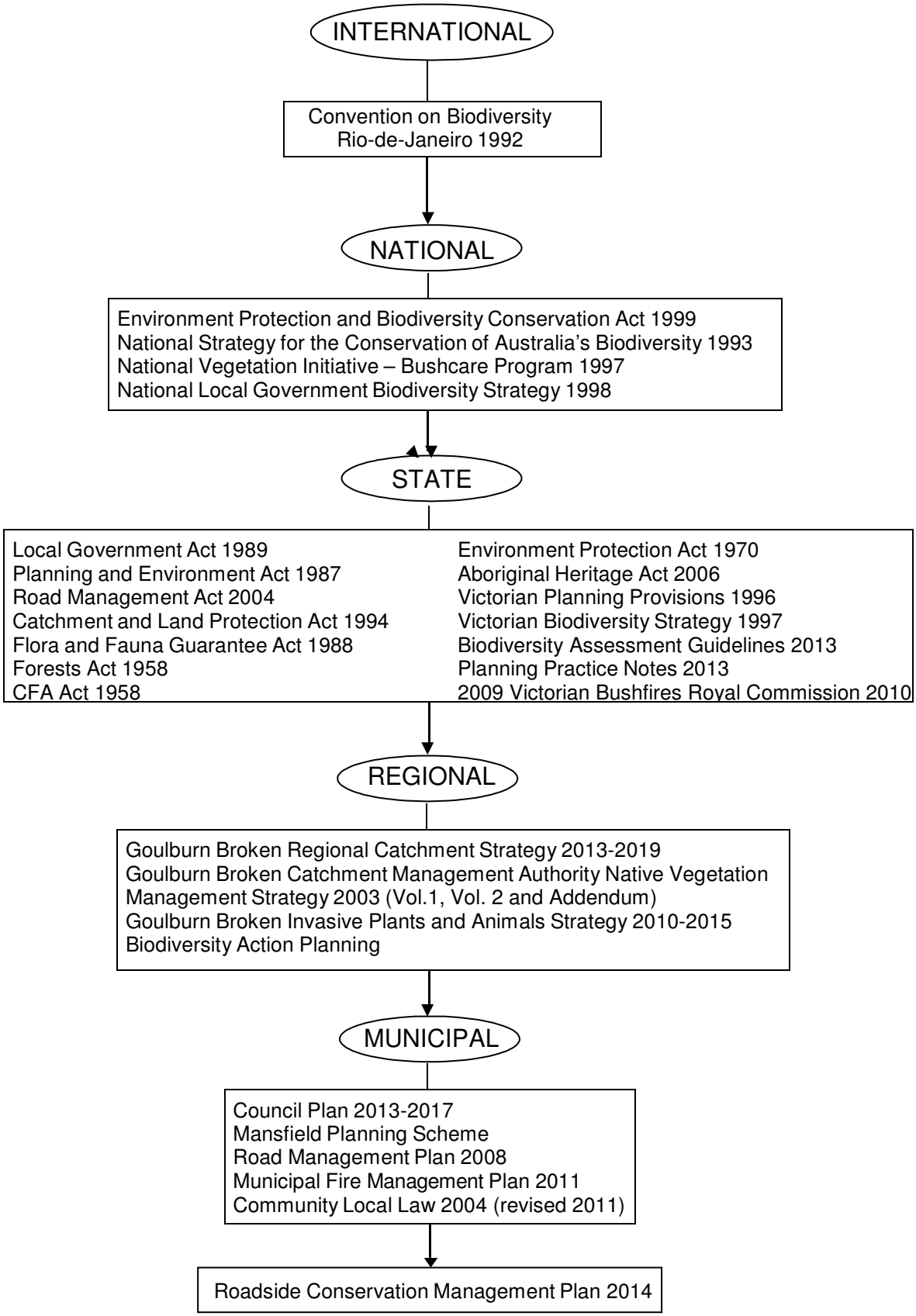
2.0 COUNCIL'S ROLE IN ROADSIDE MANAGEMENT

Mansfield Shire Council is the responsible authority for municipal roads in the Mansfield Shire, and is therefore well placed to manage risks to biodiversity in road reserves under its management.

This role is determined by a range of legislative requirements, strategies, plans and policies. Awareness, understanding and compliance with responsibilities required by these controls can address many of the issues associated with biodiversity conservation in road reserves.

2.1 Legislative and Strategic Background

Biodiversity conservation and road management is governed by an array of legislation, policy, plans and strategies. The following are some examples which may influence Mansfield Shire Council's management of road reserves.


INTERNATIONAL
Convention on Biodiversity
Rio-de-Janeiro 1992
NATIONAL
Environment Protection and Biodiversity Conservation Act 1999
National Strategy for the Conservation of Australia's Biodiversity 1993
National Vegetation Initiative – Bushcare Program 1997
National Local Government Biodiversity Strategy 1998
STATE
Local Government Act 1989
Planning and Environment Act 1987
Road Management Act 2004
Catchment and Land Protection Act 1994
Flora and Fauna Guarantee Act 1988
Forests Act 1958
CFA Act 1958
Environment Protection Act 1970
Aboriginal Heritage Act 2006
Victorian Planning Provisions 1996
Victorian Biodiversity Strategy 1997
Biodiversity Assessment Guidelines 2013
Planning Practice Notes 2013
2009 Victorian Bushfires Royal Commission 2010
REGIONAL
Goulburn Broken Regional Catchment Strategy 2013-2019
Goulburn Broken Catchment Management Authority Native Vegetation Management Strategy 2003 (Vol.1, Vol. 2 and Addendum)
Goulburn Broken Invasive Plants and Animals Strategy 2010-2015
Biodiversity Action Planning
MUNICIPAL
Council Plan 2013-2017
Mansfield Planning Scheme
Road Management Plan 2008
Municipal Fire Management Plan 2011
Community Local Law 2004 (revised 2011)
Roadside Conservation Management Plan 2014

2.2 Council Strategic Background

- *Municipal Strategic Statement:*

The Mansfield Planning Scheme Municipal Strategic Statement (MSS), identifies that "*the maintenance of a high quality natural resource base and amenity, is critical to the long term sustainability of the economy and the environment*."

The MSS states that "*large areas of native vegetation within the Shire have been cleared for agriculture, especially in the Mansfield Basin*."

The MSS acknowledges that "*roadsides provide some of the most significant examples of native habitat and these require protection*." A key strategy to achieve this is to "*encourage the preparation and implementation of Roadside Management Plans by the Shire, in consultation with DEPI and VicRoads*."

- *Council Plan:*

A key strategic objective of the Mansfield Shire Council Plan 2006-2009 was a sustainable environment that "*embraces our responsibility as custodian of community resources, by aiming to achieve maximum benefit to the community from all our resources, while valuing and enhancing our environment"*. A strategy to achieve this objective includes; *"develop and implement environment strategies to provide a framework for improved environmental practices Shire-wide that protect and enhance the natural and heritage values*".

Mansfield Shire Council Plan 2013-2017 refers to different themes identifying a wide range of community aspirations with a leading theme being "improving Our Built and Natural Environment". A stated goal of this plan is "*our businesses, residents, ratepayers and visitors act responsibly and proactively to protect and enhance the environmental features we value".*

3.0 OBJECTIVES OF ROADSIDE CONSERVATION MANAGEMENT PLAN

- Ensure the safe function of roads for vehicle transit.
- Increase the adoption of best practices by all land managers.
- Maintain and enhance biodiversity.
- Protect service assets located on roadsides.
- Minimise disturbance to native vegetation.
- Control erosion.
- Prevent spread of weeds and soil pathogens.
- Minimise disturbance to native wildlife.
- Minimise disturbance to cultural heritage.
- Encourage natural regeneration.

4.0 PRINCIPLES OF ROADSIDE CONSERVATION

4.1 Retention of Existing Vegetation Communities

The Roadside Conservation Management Plan recognises the objectives in the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* and the Goulburn Broken Catchment Management Authority Native Vegetation Management Strategy 2003.
The priorities are:

- **Retain** existing native vegetation by **avoiding** removal and **minimising** disturbance. The 'no net loss' principle will apply to **offsets** of unavoidable removal of native vegetation.
- **Prevent the decline** of native vegetation communities by actively conserving roadsides.

- Enhance priority habitats.
- **Improve connectivity** through revegetation of potential corridors.

Principles to note when implementing these priorities are:

- Remnant vegetation will be identified, conserved and enhanced.
- Some grassland communities are naturally devoid of trees and shrubs.
- The importance of understorey and ground-level habitat (logs, branches and leaf litter) will be recognised.

4.2 Regeneration

Natural regeneration of native vegetation will be protected and encouraged except where:

- It poses a safety risk.
- It interferes with the road clear zones, table drains, sign posting, sight lines, road widening and road construction, or where overhead power lines exist.

4.3 Habitat for Wildlife

- Natural regeneration on roadsides will be encouraged, especially where it forms wildlife corridors.
- Dead trees or limbs containing hollows that have fallen naturally will be retained to provide habitat unless they are identified as a safety risk.

4.4 Rare and Threatened Species

- Department of Environment and Primary Industries (DEPI) will provide data on the location and status of significant sites and associated specific management requirements for these sites.

4.5 Waterways

- Waterways will be protected.
- Prior to any works, Council will consult with the Goulburn Broken Catchment Management Authority (GBCMA) and DEPI where works may impact on watercourses or / and wetland areas.

4.6 Road Safety

- Use best practice vegetation management to ensure safety of road users

5.0 ROADSIDE CONSERVATION VALUE ASSESSMENT

An assessment of all roads outside townships, for which Council is the responsible authority, has been undertaken to determine the conservation values. The assessment method was taken from the Roadsides Conservation Advisory Committee Roadside Assessment Handbook, 2000. A conservation value of high, medium or low is generated through a vehicle-based assessment of the presence of indicating factors including:

- Roadside width.
- Fauna habitat (presence of trees, shrubs, grasses, leaf litter, fallen timber, rocks/crevices or wet marshy land).
- Regeneration.
- Wildlife corridor.
- Weed cover.
- Site disturbance.
- Listed species status.

➢ *High Conservation Value:*

- Low disturbance.
- Canopy, mid and lower native vegetation layers present (including regeneration).
- Low weed presence.

- Native vegetation occurs across majority of roadside.
- Includes a range of habitats and may form a wildlife corridor.
- May provide habitat for rare or threatened species.
- Generally requires little maintenance.

➢ *Medium Conservation Value:*
- Moderate disturbance.
- Native vegetation occurs mainly in patches.
- Some regeneration.
- Some habitat features.

➢ *Low Conservation Value:*
- Substantially disturbed or modified.
- Predominately non-native vegetation.
- Little to nil regeneration.
- Few habitat features.
- Potential for increased fire risk.

5.2 Roadside Conservation Value Map Booklet

The roadside conservation values have been recorded utilising Global Positing System (GIS) and Mobile-Map. This electronic data is available on Council's GIS system. This information has been used to produce a roadside conservation value map booklet that can be utilised by all staff, in conjunction with this document, to make informed decisions regarding roadside management.

6.0 RISKS TO ROADSIDE BIODIVERSITY

The Reference Group of a joint local government and Goulburn Broken Catchment Management Authority project, *Goulburn Broken Catchment Roadside Biodiversity Risk Management Protocols*, of which Mansfield Shire Council is a member, identified 7 activities that have the potential for the greatest impacts on biodiversity on roadsides. The table below outlines these activities and associated level of risk.

Table 1: Risk Score* Summary

	Program						
Potential Impact	Road construction & maintenance	Fire prevention works	Livestock movement & grazing	Slashing & spraying	Fence & property access	Roadside rehabilitation	Firewood collection
Native vegetation removed/effected	9	9	9	8	8	8	8
Loss or damage to habitats	9	9	9	8	8	8	8
Accidental pest spread, weeds etc	8	8	8	9	7	7	6
Contamination run-off sediments dust	7	7	7	6	5	5	5
Altered water regimes, drainage etc	6	5	4	4	4	4	4

***Score range is 2-10. Scores of 2-4 indicate lowest risk, 5-7 moderate risk and 8-10 high risk.**

Table sourced from *Goulburn Broken Catchment Roadside Biodiversity Risk Management Protocols Report, December 2007.*

The risk of biodiversity loss is high when planning for strategic works is inadequate and works are undertaken without sufficient knowledge and consideration of the biological significance of road reserves.

7.0 COUNCIL RESPONSIBILITIES AND PROCEDURES FOR MANAGEMENT OF ROADSIDE ACTIVITIES

7.1 Access Points

- **Legislation and Permits**

Consent from Council is required for construction of a property access point within a municipal road reserve by a third party such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Consent for Works in a Municipal Road Reserve' Permit Form A (Non Utility Minor Works).

In most cases, a Planning Permit for native vegetation removal (trees, shrubs and grasses) on a road reserve is required under the Mansfield Planning Scheme. Council's Planning staff can determine the need for a Planning Permit as required by the Mansfield Planning Scheme.

- **Guidelines**

Where biodiversity impacts are likely, the proponent should demonstrate that options to avoid and minimise vegetation/habitat removal and soil disturbance have been considered and where possible adopted. Such as:

- Changing the crossing/entrance to a more suitable site.
- Conducting works and operating machinery from the private property side of the road reserve boundary

Council must make every effort to ensure the proponent is aware of the potential for biodiversity impacts, how to avoid them and their responsibility to implement actions through conditions of permits and written consent.

If biodiversity impacts are likely, ensure a written consent for works in a road reserve permit requires the applicant to supply a works plan detailing the following:

- Defined extent and location of works, exceed limits and disturbance is minimised.
- Conditions for use and movement of machinery on roadside.
- Conditions for rubbish removal.
- Conditions for erosion/sediment control.
- Conditions for follow up weed control.
- Reference to identified biodiversity assets and conservation value.
- Reference to other compliance and permit requirements such as a Planning Permit for vegetation removal and the Community Roadsides Handbook.

7.2 Fencing

Legislation and Permits

Consent from Council is required for construction of a fence within a municipal road reserve by a third party such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Consent for Works in a Municipal Road Reserve' Permit Form A (Non Utility Minor Works). In most cases, a Planning Permit for native vegetation removal (trees, shrubs and grasses) on a road reserve is required under the Mansfield Planning Scheme. Council's Planning staff can determine the need for a Planning Permit as required by the Mansfield Planning Scheme.

Guidelines

Fencing works undertaken by a third-party or Council (for Council managed land) should be undertaken using the following:

- Planning or Environment staff must be consulted if native vegetation removal is deemed unavoidable.
- Works and machinery operation must be conducted from the property side of the

road reserve boundary.
- The extent and location of works must be clearly defined and understood by those undertaking the work.
- Waste must not be left on the road reserve.
- Erosion and sediment control measures must be in place.
- Biodiversity assets and roadside conservation value must be identified and understood by those undertaking the work.
- A minimum extent of grass can be slashed along the fence line (minimum height for native grasses specified in the Mansfield Planning Scheme) if impeding work. The area must not be graded or ploughed.

7.3 Fire Prevention

Legislation and Permits

Consent from Mansfield Shire Council is required for all works that are to be undertaken within a municipal road reserve by a third party, such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

The Road Management (Works and Infrastructure) Regulations 2005 provides an exemption to the need for such a permit for mowing. Refer to section 7.15 for Council's guidelines on slashing.

In most cases, a Planning Permit for native vegetation removal (trees, shrubs and grasses) on a road reserve is required under the Mansfield Planning Scheme. A written agreement between DEPI and Council must be in place before a Planning Permit exemption is granted for the removal of native vegetation for bushfire prevention purposes.

- A written Agreement documents strict guidelines and is only applicable on high bushfire risk roads ie Priority Access Roads or Fuel Reduced Corridors listed in Municipal Fire Management Plan.

Council's Planning staff can determine the need for a Planning Permit as required by the Mansfield Planning Scheme.

Guidelines

The development of strategic firebreaks is one method to protect property and ensure the safety of road users from wildfire. All roadsides do not need to be cleared, 'cleaned up' or mowed to provide reasonable fire precautions. The Municipal Fire Management Plan lists Priority Access and Fuel Reduced Corridor roads and the specified fuel reduction requirements.

Native grasses have lower fuel loads than introduced grasses.

Heavier fuels like branches and logs (greater than 25mm in diameter) are slower to ignite than fine fuels and give off heat more slowly, therefore can be retained in road reserves while maintaining an effective firebreak.

All other options must be explored before permitting firebreaks on road reserves, especially those classed as having a high conservation value. Wherever possible, firebreaks are to be placed on neighbouring land which has already been cleared or where the road reserve is already cleared and the primary flora is introduced (pasture) grass and/or weeds.

Proposed fire prevention projects must adhere to the Municipal Fire Management Plan and be subject to approval by Council's Fire Prevention and Environment staff.

All strategic fire prevention works on a municipal road reserve:

- Must have approval from the CFA in consultation with Council's Fire Prevention, Engineering and Works and Environment staff prior to works commencing.

- Must comply with Mansfield Shire Council's Municipal Fire Management Plan and *Country Fire Authority Act* 1958.
- Must comply with CFA Roadside Fire Management Guidelines.
- Must comply with the Mansfield Planning Scheme.
- Must comply with the *Flora and Fauna Guarantee Act* 1988 and the Commonwealth's *Environment Protection and Biodiversity Conservation Act* 1999.

7.4 Firewood Collection

Legislation and Permits
Consent from Mansfield Shire Council is required for all works that are to be undertaken within a municipal road reserve by a third party such as an adjoining landowner, general public, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).
A permit allowing firewood collection on roadsides managed by Council must be obtained from Council prior to collection.

The Department of Environment and Primary Industries (DEPI) manage firewood collection on roadsides in State forests.

Firewood collection on roadsides in State forests is only allowed in a designated firewood collection area. Contact DEPI for further information.

VicRoads do not allow firewood collection on roadsides they manage.

Guidelines
Branches and logs are very important habitat for ground-dwelling fauna, firewood collection on roadsides significantly contributes to the decline of some species, and therefore Council must aim to retain the majority of this material in high conservation value roadsides. Firewood collection is not permitted on roadsides of high conservation value.
A permit allowing firewood collection on roadsides managed by Council must be obtained from Council prior to collection. Only fallen timber can be collected, standing vegetation, dead or alive, must not be cut down.

7.5 Harvesting Wild Flowers, Foliage and Seed

Legislation and Permits
Consent from Mansfield Shire Council is required for all works that are to be undertaken community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

A permit is required to be obtained from the Department of Environment and Primary Industries (DEPI) under the *Flora and Fauna Guarantee Act* 1988. DEPI Office in Benalla issues such permits. This permit is to be presented to Council with a completed 'Works in a Municipal Road Reserve Permit' application form.

7.6 Horse Riding

Council consults with commercial trail ride operators utilising high conservation value roadsides to minimise any possible risks to biodiversity.

7.7 Land Subdivision

Legislation and Permits
In most cases a Planning Permit is required for native vegetation removal (trees, shrubs and grasses) under the Mansfield Planning Scheme.

Guidelines
Subdivision proposals must be reviewed to ensure that developers incorporate and

consider roadside native vegetation in subdivision design, including provision of utilities and property access.

On high and medium conservation value roadsides, Council will consult with interested parties, including the Department of Environment and Primary Industries if required, utilising both on-site inspections and hardcopy plans to ensure subdivision design will avoid and minimise impacts on roadside vegetation.

7.8 Livestock Movement, Grazing and Droving

Legislation and Permits
A Local Laws Permit is required for livestock movement, grazing and droving.

Guidelines
Proposals for livestock movement, droving and grazing on roads must be referred to Council Local Laws staff for compliance with Mansfield Shire Council Community Local Law, and to Council's Environment staff for environmental assessment and recommendations. Site conditions and conservation values must guide recommendations.

Ecological objectives are the primary consideration when allowing grazing or movement of livestock on roadsides, with native vegetation and habitats, for example, timely reduction of introduced grasses. Grazing of native vegetation and disturbance of habitats should not be undertaken if it is likely to contribute to a loss of vegetation and habitat quality.

- Droving or grazing on High Conservation Value roadsides is not permitted.
- Droving or grazing on Medium Conservation Value roadsides can be permitted where ecological benefits, such as weed control can be demonstrated, or to reduce fuel in accordance with the Municipal Fire Management Plan.
- Droving or grazing on Low Conservation Value roadsides can be permitted if feed is at sufficient levels to prevent soil compaction which can lead to erosion.
- Conditions will be placed on permit holders when given approval to graze/drove livestock.A Local Laws Permit for livestock grazing must include as a minimum:
- A maximum life of 12 months from the date of issue, with 3-monthly inspections, enables the option to cancel if conditions decline (this is an aid to minimising impact).
- Appropriate precautions should be implemented to ensure no damage occurs to native vegetation growing within the road reserve, including planted revegetation works.
- Grazing should be avoided when ground conditions are wet or extremely dry to avoid compaction and erosion of soil.
- In the event that livestock are causing damage, including where overgrazing occurs, they must be removed from the road reserve without delay.
- No supplementary feeding of stock in road reserves.
- Driving vehicles on roadsides must be avoided.
- Livestock should not remain in road reserves overnight.

A Local Laws Permit for livestock movement/droving must include as a minimum:

- The use of roads for movement of livestock is minimised so far as is practicable. (Roads should not be used as an alternative to providing internal property access)
- Livestock should be supervised by a person/s competent in the management of livestock.
- Livestock movement is avoided when ground conditions are wet or extremely dry to avoid compaction and erosion of soil.
- Livestock must be moved promptly and not allowed to wander aimlessly.
- No supplementary feeding of stock in road reserves.
- Driving vehicles on roadsides must be avoided.
- Livestock should not remain in road reserves overnight.

7.9 Pest Plants and Animals

Legislation and Permits

Consent from Mansfield Shire Council is required for all works that are to be undertaken within a municipal road reserve by a third party, such as an adjoining landowner, community group or contractor under the *Road Management Act 2004*. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

Declared noxious weeds in Victoria are plants that have been proclaimed under the *Catchment and Land Protection Act 1994* which require management to eradicate. These plants cause environmental or economic harm, or have the potential to cause such harm.

It is Council's responsibility for management of weeds existing in the roadside that are classed as regionally prohibited and regionally controlled weeds in the Goulburn Broken Catchment. Established weeds, as classed above, and pest animals found on roadsides are managed by Council in accordance with the approved Municipal Roadside Weed and Pest Animal Management Plan. This is a requirement of the *Catchment and Land Protection Act 1994 (Authorised Version incorporating amendments as at 18 November 2013).*

Guidelines

Noxious and environmental weeds can be spread on roadsides via machinery, vehicles, livestock, water and movement of soil. Council and all other parties undertaking works or activities on roadsides are obligated, under the Catchment and Land Protection Act 1994, to prevent the spread of noxious weeds.

Environmental weeds are weeds that threaten natural ecosystems. They are capable of invading native plant communities and out-competing native species; resulting in a reduction of plant diversity and loss of habitat for native fauna.

A pest animal is an introduced animal with an established self-supporting population in the wild (also known as *feral*) that is a threat to human health, primary production and/or the natural environment. Responsibility for management of established weeds classed as regionally prohibited and regionally controlled weeds in the Goulburn Broken Catchment and pest animals on roadsides is Council's and are managed in accordance with the approved Municipal Roadside Weed and Pest Animal Management Plan. This is a requirement of the *Catchment and Land Protection Act 1994 (Authorised Version incorporating amendments as at 18 November 2013).* Responsibility for management of established pest animals on private land is that of the landowner.

There is no legislative requirement to control or remove environmental weeds. Landholders will be alerted to the potential problem of environmental weed spread in section 5.7 Pest Plants (Weeds) of the Community Roadside Handbook.

Refer to section 7.16 of this document for roadside spraying guidelines.

Weed Category	Type of Land	Responsibility for Management
State Prohibited	All including private land	Department of Environment and Primary Industry DEPI
Regionally Prohibited	Private Land	Landowner
	Freeway or Arterial Road	VicRoads
	Local Roads	Council
	Unlicensed Unused Road Reserves	Council
	Licensed Unused Road Reserves	License holder
Regionally Controlled	Private Land	Landowner
	Freeway or Arterial Road	VicRoads
	Local Roads	Council
	Unlicensed Unused Road Reserves	Council
	Licensed Unused Road Reserves	License holder

Weed Category	Weeds Classified in the Goulburn Broken Catchment	
State Prohibited	Alligator Weed Black Knapwed Camel thorn Ivy leaf Sida Mesquite Parthenium Weed Salvinia Water Hyacinth Bear-skin fescue Branched broomrape Giant knotweed Giraffe thorn Hawkweed Japanese knotweed	Japanese knotweed hybrid Horsetail Karoo thorn Lagarosiphon Lobed needle grass Marijuana Mesquite Mexican feather grass Nodding thistle Perennial Ragweed Poverty weed Tangled Hypericum
Regionally Prohibited	Ragwort Serrated Tussock Wild Garlic African daisy African feather grass	Artichoke thistle Cape tulip (one-leaf) Cape tulip (two-leaf) Illyrian thistle Wild garlic
Regionally Controlled	African boxthorn African Love Grass Amsinckia Bathurst burr Blackberry Boneseed Buffalo burr Caltrop Cape broom Chilean cestrum Devil's claw (purple flower) Devil's claw (yellow flower) Dodder English Broom Gorse Golden thistle Gorse Great mullein Hardheads Hawthorn Hemlock Horehound Khaki weed	Noogoora burr Ox-eye daisy Paterson's Curse Perennial thistle Prairie Ground Cherry SaffronThistle Scotch thistle Silverleaf nightshade Spiny burr grass Spiny emex Spiny rush St Barnaby's thistle St.John'sWort Sweet Briar Thorn apple (common) Thorn apple (long-spine) Thorn apple (recurved) Tree of heaven Tufted honey flower Tutsan Variegated thistle Viper's bugloss

Source: Department of Environment and Primary Industries: http://www.depi.vic.gov.au/agriculture-and-food/pests-diseases-and weeds/weeds/invasive-plant-classifications/weed-classification-victoria (Jan 2014)

7.10 Recreation Vehicles

Legislation and Permits

A Local Laws Permit is required to use a recreational vehicle on any Council managed land or reserve.

Guidelines

Council must make every effort to ensure the proponent is aware of the potential for biodiversity impacts, how to avoid them, and their responsibility to implement actions through conditions of permits and written consent. Permits must not be issued for high conservation value roadsides. Permits should be referred to Council Environment staff for an environmental assessment. If biodiversity impacts are likely a permit application should be refused.

7.11 Rehabilitation

Legislation and Permits

Consent from Mansfield Shire Council is required for rehabilitation projects that are to be undertaken within a municipal road reserve by a third party, such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works within a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

Guidelines

Roadside rehabilitation may be desirable in some situations, however, this is not always the case. There may be situations when it is incompatible with biodiversity conservation objectives. A lack of awareness and understanding of the potential for impact increases the risks to biodiversity such as:

- Poor site selection and works preparation, leading to the loss or damage of native groundcover grasses, herbs, mosses etc and habitats such as leaf litter, woody debris.
- Changes to vegetation structure and density.
- Soil disturbance.
- Changes to shading and soil moisture.
- Use of herbicide.
- Inappropriate species selection.
- Weed invasion.

Works undertaken must reflect biodiversity and road safety objectives of Council policies, strategies and plans, and must be referred to Environment, Engineering and Rural Roads staff for approval.

Proposals for roadside rehabilitation should have defined biodiversity objectives, and a strategic approach to rehabilitation work in road reserves which aligns with catchment targets and biodiversity objectives is recommended.

Preference should be given to proposals which enhance the quality of remnant vegetation, provide vegetation linkages and/or enhance threatened species habitat.

Revegetation works and methods must be planned to minimise disturbance.

Only indigenous species of the appropriate vegetation type for the site must be used. Rehabilitation must include removal/treatment of declared noxious and environmental weeds that are threatening native vegetation and habitats.

7.12 Road Construction and Maintenance

Legislation and Permits

A Planning Permit is required for the removal of native vegetation under the Mansfield Planning Scheme, with some exemptions that apply. See Appendix 4 for flowcharts outlining exemptions for tree removal and lopping.

Consent from Mansfield Shire Council is required for road construction and maintenance projects that are to be undertaken within a municipal road reserve by a third party, such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Consent for Works in a

Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

Guidelines

- ***Environmental Management Plans***

Contractors undertaking major road construction and maintenance projects, and ongoing maintenance works on an as needs basis on behalf of Mansfield Shire Council, are required to prepare an Environmental Management Plan for the project. The Plan should be site specific, and appropriate to the conservation value of the roadside native vegetation and complexity of the project.

- ***Assess Site Prior To Work***

An environmental assessment of a road construction and maintenance project site, will identify areas of environmental value, via the completion of a Road Construction and Maintenance Environmental Management Checklist, for works undertaken by both Council and contractors (Appendix 3). The checklist and assessment report is to be incorporated into works plans and managed appropriately.

The initial site inspection, for works undertaken by external contractors, should include Council Environment and Engineering and Works staff, and the contractor's project and site manager if applicable.

The initial site inspection for works being undertaken by Council staff should be completed by the Rural Roads Supervisor, with referral to Environment staff for high conservation value roadsides and as required.

To minimise the impact of works on biodiversity, the site inspection will identify:

- Significant or protected vegetation that is to be secluded from disturbance and classified as 'no-go' zones.
- The 'construction' zone that determines exact locations of sites, preferably on previously disturbed land, for stockpiles, turning circles and areas for operation of machinery.
- The area of vegetation that is approved for removal, and identify measures to mitigate weed invasion and soil erosion.
- Special management procedures specified by roadside conservation values.
- Identify exact location of noxious and environmental weeds.

All this information is to be transferred to a site map that clearly identifies these areas for use by the project manager and works crew.

Financial year works plans for major construction projects, undertaken by external contractors, and monthly construction and maintenance program schedules, undertaken by Council staff, must be submitted to Environment staff to ensure necessary permits are obtained, and management plans are developed prior to road construction and/or maintenance project works commencing. Please note; the statutory time for Council to issue a Planning Permit is 60 days (subject to the assessment process).

- ***Minimise Disturbance to Native Vegetation***

Trees are good – bush is better!

Remnant native vegetation includes trees, shrubs, grasses, creepers and herbs that combine to provide valuable habitat for native wildlife. It is important to note that some patches of native vegetation are naturally devoid of trees, such as grasslands. Dead trees should be retained wherever possible, as they provide the important functions of habitat for native vegetation if left undisturbed.

Identified 'no-go' zones must be securely protected by highly visible temporary fencing or similar, and signage prior to works commencing. Machinery is to be prohibited from entering these areas, and confined to approved 'construction zones' during the period of road construction and/or maintenance project. Vegetation approved for removal, must be

identified by highly visible paint or tape. The 'no-go', 'construction' and approved vegetation removal zones, must be identified on a site plan that all staff working on the project are familiar with and are confident to use. Machinery size and type must be suited to the works site. Large machinery working in a small space will increase the likelihood of accidental destruction of vegetation.

Tree roots need to access water, nutrients and space to grow. Storing fill and driving even small vehicles around trees can damage fine roots and cause soil compaction. This can cause root damage, lack of oxygen and changes to water runoff patterns that can damage or kill trees. Refer to Appendix 5. Native Vegetation-Technical information sheet.

Don't place fill or windrow spoil over ground flora or tree roots as it will suffocate them and ultimately cause the vegetation to decline in health and perish. Remove spoil and dispose off site away from native vegetation.

All approved vegetation removal or lopping must only be the minimum amount necessary. Minimum amount is clarified in flowcharts in Appendix 4.

Council staff and contractors undertaking tree management activities on behalf of Council, must leave any cut material on site. Logs and branches cannot be removed for Council or personal use without a permit from Council.

Avoid 'tidying up' debris timber into piles. These piles harbour pest animals and weeds, giving the false impression that trees have been removed. Leaving tree logs and branches on a roadside, in a 'natural' scattered effect, provides habitat for native wildlife. Windfall timber created during extreme storm events should be addressed as outlined in section

7.22 '*Windfall Timber Management*'.

- ***Control Erosion***

Erosion is a process where exposed top soil is removed by processes such as wind and water movement. This produces sediment which silts drains, creeks and rivers.

The risk of erosion must be reduced by implementing the following management options:

- Minimise the amount of exposed surfaces and areas being actively worked at the same time.
- Minimise the timing between clearing and stripping of the site, and protect soil by covering exposed surfaces with erosion control materials progressively as each section of the works is complete.
- Install and maintain a combination of silt fences, jute matting and water diversion devices, such as catch drains to maximise erosion control.
- Treat open drains to prevent erosion before adjacent ground is disturbed.
- Cover exposed surfaces, such as stockpiles, with mulch or erosion control matts.
- Coordinate work schedules, if more than one party is working on a site, so that there are no delays in construction activities resulting in disturbed land remaining.
- Keep drainage line soil loose, to enable prompt revegetation.
- Program construction activities so that the area of exposed soil is minimised during times of the year when the potential for erosion is high, for example during periods when severe weather events are common, such as storms and heavy rain.
- Continually assess the effectiveness of erosion control measures, and make improvements where necessary.

- ***Prevent Spread of Weeds***

Noxious and environmental weeds can be spread during road construction and maintenance projects, via machinery, water, vehicles and movement of soil. Council is obligated under the Catchment and Land Protection Act 1994, to prevent the spread of noxious weeds.

Declared noxious weeds in Victoria are plants that have been proclaimed under the Catchment and Land Protection Act 1994 which require management to eradicate. These plants cause environmental or economic harm or have the potential to cause such harm.

Environmental weeds are plants that threaten natural ecosystems. They are capable of invading native plant communities and out-competing native species; resulting in a reduction of plant diversity and loss of habitat for native fauna. Along roadsides, for example, grassy weeds can threaten native grassland remnants that provide important habitat for native species.

An environmental assessment of the project site prior to the commencement of works will identify exact locations of noxious and environmental weeds that need to be identified on a site map with other areas of significance such as 'no-go', 'construction' and approved vegetation removal zones. The project manager must be familiar with priority weeds in the Goulburn Broken Catchment as stated in the Goulburn Broken Catchment Management Authority's Weed Action Plan, and have a weed identification booklet onsite at all times.

The spread of weeds must be controlled by:

- Treating a weed infestation in a project construction zone with a chemical application before the project commences; only spray weed eradication chemicals on days of calm, dry weather, and avoid native vegetation, especially ground cover.
- Brushing/blowing/washing down machinery before leaving areas of weed infestation.
- Brushing/blowing/washing down machinery before entering areas which have low weed infestation and/or an area of intact native vegetation in the lower, mid and upper storeys.
- Beginning work in areas of high conservation value and moving to areas of lesser conversation value.

Machinery should be washed/blowed/brushed down at least 500m from creeks and vegetation of high and medium conservation value.
More information on weeds is contained in section 7.9 '*Pest Plants and Animals*'.

- ***Minimise Disturbance to Native Fauna***

Roadside native vegetation provides habitat for native wildlife, and provides corridors for the movement of animals. Efforts for protection of fauna habitat tend to focus on tree protection; however, many species of native fauna live at ground level. It is important to note that native fauna includes soil organisms, insects, mammals, birds and reptiles.

Minimise disturbance by:

- Avoiding and minimising machinery movement in vegetated areas.
- Making project site staff aware of the potential presence of fauna.
- Retaining, wherever possible, trees with hollows, including dead trees and fallen logs and branches at ground level.
- Prohibiting tree felling during nesting season unless they are deemed to pose an immediate risk to safety.

- ***Minimise Disturbance to Cultural Heritage***

Road construction and maintenance activities that involve ground disturbance and/or tree removal may impact cultural heritage objects and places. Mansfield Shire Council is obligated by legislation to protect both Indigenous and non-Indigenous cultural heritage sites.

Prior to work commencing the project manager must contact Council's Planning staff to identify if the works site is subject to planning controls in relation to cultural heritage and consult official cultural heritage registers that are administered by Aboriginal Affairs Victoria and Heritage Council Victoria, sector within the Department of Transport,

Planning and Local Infrastructure. Management of cultural heritage sites must be negotiated and approved by these organisations prior to the commencement of work.

Identified sites and objects must be marked on a site map that also identifies other significant areas such as 'no go', 'construction' and native vegetation removal and weed infestation zones.

Work should cease immediately if a cultural heritage site or artefact is found and the project manager must contact the Manager of Engineering.

- ***Manage Waste and Litter***

All parties involved with road construction and maintenance works should aim to avoid and minimise waste production. Inappropriate storage, transport, use and disposal of waste, including hazardous material, can lead to soil and water contamination. This can cause serious detriment to the environment, the need for future remediation (and associated costs) and prosecution by the Environment Protection Authority.

These measures must be implemented for waste management:

- Wherever possible do not take material packaging on site.
- Remove waste and dispose of at a waste transfer station or registered landfill.
- Storage, transport, use and disposal of hazardous materials must be in accordance with the manufacturer's guidelines, material safety data sheet and applicable legislation.
- Reuse material such as topsoil, mulch, large logs (for wildlife habitat) on site where possible.
- Weather-proof rubbish and recycling disposal facilities must be available on site – litter on site will not be tolerated.

All construction waste must be removed from the site immediately following the completion of the works and disposed of according to manufacturer's guidelines, material safety data sheets and applicable legislation.

- ***Rehabilitate Disturbed Areas***

Replanting and protection measures associated with offsets for native vegetation removal planning permits must be completed within the timeframe indicated by permit conditions.

Drainage lines must be lined with erosion control matting in a timely fashion after their construction and revegetated within 3 months of the completion of a project.

- ***Emergency Procedure***

If an environmental incident occurs as a direct result of road construction and maintenance works the project manager/supervisor must immediately contact Councils Engineering Manager.

The project manager of an external contractor must submit a report to the Engineering Manager outlining what the environment incident was, how it occurred, proposed remediation works and measures that have been put in place to minimise reoccurrence of the incident within 5 working days of the incident.

The supervisor of works undertaken by Council must submit a report to their manager that is forwarded to the Engineering Manager, outlining what the environment incident was, how it occurred, proposed remediation works and measures that have been put in place to minimise reoccurrence of the incident within 5 working days of the incident.

- Pollution of waterway.
- Soil contamination.
- Unauthorised native vegetation removal.
- Death of native wildlife.
- Destruction of cultural heritage.

A contractor carrying out major works must have an environmental emergency procedure outlining mitigation measures to be implemented, should an incident occur that is to be included in the project Environmental Management Plan (refer to Appendix 3).

- ***Monitoring, Evaluating and Reporting***

Council's Engineering Manager is responsible for ensuring an assessment of the works site of a major construction project occurs, at least once during the project to determine compliance with legislation, planning permits, Roadside Conservation Management Plan, other Council Policies, Strategies and Plans, and applicable Environmental Management Plans. Environmental management breaches observed during a project undertaken by an external contractor are to be reported to Councils Engineering Manager.

Council's Rural Roads Supervisor will inspect major works undertaken by Council at least once for each works site. Environmental management breaches identified during a project undertaken by Council are to be reported to the Senior Works Coordinator.

Council's Environment staff, at times with an external auditor, will audit compliance at high and medium conservation value roadsides at construction and maintenance sites, either during and/or when a major project is completed. The findings will be reported to Council's Senior Works Coordinator, for projects undertaken by Council, and Engineering Manager, for projects undertaken by external contractors. The audit report is to be forwarded to the Managers of the relevant departments if major environmental management breaches are identified.

7.13 Sand, Soil and Gravel Extraction

Legislation and Permits

Consent from Mansfield Shire Council is required for any works that are to be undertaken within a municipal road reserve by a third party, such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

A Planning Permit is required for stone or soil extraction under the Mansfield Planning Scheme.

Approval from the Department of Primary Industries is required for sites where proposed extraction is greater than two metres, and for areas greater than 2000 square metres under the *Extractive Industries Development Act* 1995.

Council must obtain a Work Authority from the Department of Primary Industries for any proposed sand, soil or gravel extraction on a road.

A person or organisation that proposes to carry out any search for stone on land on which there is a public highway, road or street must give 21 days notice of the proposed work to the managing authority.

Guidelines

Planning Permits should be referred to Council's Environment staff for assessment. Conditions for weed control, erosion control and protection of biodiversity assets should be included to ensure best practice.

Such works are not permitted to occur on roadsides with a high conservation value.

7.14 Signs

Legislation and Permits

Consent from Mansfield Shire Council is required by a third party, such as a Real Estate Agent, contractor, community group or adjoining landowner, to place a sign within a municipal road reserve under the *Road Management Act* 2004. Council has a permit

system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

A Planning Permit may also be required under the Mansfield Planning Scheme.

Guidelines
Affixing signs directly to trees can cause a tree to decline in health. Approval must not be given to affix a sign directly to a tree or shrub on a road reserve.

7.15 Slashing and mowing

Legislation and Permits
A Planning Permit is required under the Mansfield Planning Scheme to slash or mow native grasses.

Guidelines
Slashing or mowing on roadsides has a high risk of removing or destroying native vegetation, incurring loss of or damage to habitats and causing accidental spread of weeds.

Slashing or mowing of grass (native or exotic) for fire prevention, must be approved by the Council Fire Prevention Officer and Environment staff, in accordance with the Municipal Fire Management Plan, Country Fire Authority Act 1958 and the Road Management (Works & Infrastructure) Regulations 2005. Slashing/mowing of applicable areas must be undertaken by Council or approved contractor with conditions of machinery hygiene to prevent weed spread and minimum mowing height of 100mm timed just prior to the commencement of the Fire Hazard Period.

7.16 Spraying

Legislation and Permits
Consent from Council is required by a third party, such as an adjoining landowner, community group or contractor to undertake herbicide spraying on a road reserve under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

A Planning Permit is required under the Mansfield Planning Scheme to remove or destroy native vegetation (including grasses). Some exemptions apply.

Guidelines
Spraying on roadsides has a high risk of removing or destroying native vegetation, incurring loss of, or damage to habitats and causing accidental spread of weeds.

Council must ensure third parties are aware of the potential impacts of the works and requirements for mitigation measures to be implemented. The Community Roadside Handbook will outline best practice guidelines. Community enquiries must be referred to an Environment Officer.

Damaging plants other than weeds can cause greater weed problems due to larger areas of disturbance. This risk must be reduced by including the following conditions on written consent:

- The applicant to hold appropriate qualifications such as Agricultural Chemical Users Permit (ACUP).
- Spray in calm and dry weather conditions.
- Spray weeds from a close distance.
- Use low pressure and large droplet size to minimise drift.
- Mark native vegetation with highly visible tape or temporary fencing.

- In instances where weeds sit among native vegetation, make sure weed control techniques are specific, such as:
    - Drilling and filling, or cutting and painting.
    - Using specific herbicides.
    - Using spray hoods where possible.
    - Hand pulling (where weed occurrence is minimal).
- While conducting weed control works, consideration must be given to managing spread of weeds. This can be controlled by:
    - Brushing/blowing/washing down machinery before leaving weed infested areas.
    - Brushing/blowing/washing down machinery before entering areas which have low weed infestation.
    - Beginning work in areas of low infestation then moving to areas of high infestation.

Dead vegetation created by spraying works can be left to undergo decomposition, or if considered a fire hazard mulch and spread back over the area rather than being 'cleaned up'.

7.17 Third-party Works

Legislation and Permits

Consent from Council is required for works within a municipal road reserve by a third party, such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works). Other permits such as Planning Permits or Local Laws Permits may also apply depending on the activity proposed.

The Road Management Act 2004 defines works as:

"*any kind of activity conducted on or in the vicinity of a road or proposed road in connection with the construction, maintenance or repair of the road or the installation, maintenance or repair of any infrastructure in, on, under or over a road and without limiting the generality of this definition includes:*

a) excavating or breaking up the surface of the road;
b) erecting a structure in, on or over a road;
c) removing or interfering with any structure or marking on a road;
d) planting or removing a tree or other vegetation;
e) tunnelling under a road;
f) connecting a road to a road
g) installing pipes, drains, cables, poles, buildings, shelters or other structures on a road reserve;
h) erecting any obstruction on a road or otherwise impeding the use of a road for the purpose of conducting any works

Guidelines

The need for consent is outlined for each of the activities listed in Section 7 of this Roadside Conservation Management Plan.

Consent enables Council to manage risks to biodiversity and safety, for activities proposed to be undertaken on road reserves.

7.18 Vegetation Removal

Legislation and Permits

A Planning Permit is required under the Mansfield Planning Scheme to remove, destroy or lop native vegetation, some exemptions apply.

Consent from Mansfield Shire Council is required for any vegetation removal (including dead trees and exotic species) that is to be undertaken within a road reserve managed by Council by a third party, such as an adjoining landowner, community group or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form A (Non Utility Minor Works).

Guidelines

Vegetation removal is guided by the State Governments *Permitted clearing of native vegetation – Biodiversity assessment guidelines*. The objective of the guideline is to create *no net loss in the contribution made by native vegetation to Victoria's biodiversity.* The key strategies for ensuring the objective for permitted clearing of native vegetation is achieved at the permit level are:

- **avoiding** the removal of native vegetation that makes a significant contribution to Victoria's biodiversity
- **minimising** impacts on Victoria's biodiversity from the removal of native vegetation
- where native vegetation is permitted to be removed, ensuring it is **offset** in a manner that makes a contribution to Victoria's biodiversity that is equivalent to the contribution made by the native vegetation to be removed.

Conditions on a Works in a Municipal Road Reserve Permit permit should include, but not limited to:

- Machinery must be operated from the private property side of the boundary wherever possible.
- Remains of trees (branches, logs etc) should be left on the roadside for wildlife habitat wherever safe to do so, fine fuels (eucalyptus leaves and fine twigs) can be mulched and spread back over the area.

7.19 Vegetation Risk Management

Council will only respond to tree management requests and concerns on roadsides that are considered an immediate risk to the safety of the road and its users.

For vegetation management issues within Residential Zones that are planted or occur in highly populated areas, please refer to Council's Street Tree Policy.

➢ *Risk to Road Safety*

Both internal and external requests for vegetation to be removed or lopped must be assessed by an appropriately qualified member of Council's Field Services team. A risk assessment report and checklist will be completed and saved to Council's records system (TRIM or similar).

Recommendations for removal or lopping of vegetation must be guided by the immediate risk to the road and its users, for example, if a tree branch has broken and is hanging from the tree and is likely to fall onto the road right away.

If it is determined that the vegetation is not an immediate risk, however still needs to be removed, follow the guidelines as per the road maintenance envelope flowcharts as outlined in Appendix 4

➢ *Risk to Privately Owned Assets*

Council does not have the resources to manage vegetation on road reserves that property owners deem as a risk to privately owned assets such as fences and buildings, and denies liability for such issues.

Property owners can undertake management works on vegetation on road reserves that they deem to be a risk to their assets, at their own expense with the following conditions:

- The property owner will need to obtain a Planning Permit from Council unless they provide an Arborists report that determines the vegetation is an immediate risk to assets (Mansfield Planning Scheme)
- The property owner will need to obtain A Works in a Municipal Road Reserve Permit from Council (*Road Management Act* 2004).

It should be noted that if Council accepted liability for vegetation risk management to privately owned assets it could result in considerable amounts of vegetation being removed from all road reserves. The costs to biodiversity and landscape amenity as a result would far outweigh the cost to replace assets such as fences and buildings.

7.20 Unused Road Reserves

The Department of Environment and Primary Industries is responsible for the management of unused road reserves and can issue licences for respective uses.

7.21 Utility Service Providers

Legislation and Permits

Consent from Mansfield Shire Council is required for any works that are to be undertaken within a municipal road reserve by a third party, such as a Utility Service Provider or contractor under the *Road Management Act* 2004. Council has a permit system in place and requires a 'Works in a Municipal Road Reserve Permit' Form B (Utility Works).

A Planning Permit may be required for native vegetation removal.

7.22 Windfall Timber Management

Council is responsible for the management of fallen vegetation on road reserves created by storm events (windfall timber).

All fallen vegetation should be retained on site if possible either as habitat logs or mulch or a combination of both.

Stock piling timber on a road reserve must be avoided, as this harbours pest plants and animals.

Council cannot, by law, receive money for fallen timber material that is needed to be removed off site and this material can be used for Council purposes only.

8.0 IMPLEMENTATION OF THE PLAN

The Plan will be managed by the Development Services Manager. Unless otherwise specified, all actions in this Plan will be overseen by the Development Services Manager.

The Plan and *Roadside Conservation Values Map Booklet* will be distributed to relevant Council Units and displayed in the Council Office and Field Services Depot.
The *Roadside Conservation Code of Practice Handbook for Field Services Staff and Contractors* and *Roadside Conservation Values Map Booklet* will be distributed to Council road maintenance staff and contractors.
The *Community Roadside Handbook* will be distributed to all Landcare groups, added to Council's New Residents Kit, and made available at the Council Office reception area.

In order to reflect changes to management practices, and to meet changing State Government and community expectations, this document will be reviewed every three years to coincide with the review of the Mansfield Planning Scheme and Council Municipal Fire Management Plan. Principles of the Plan will need to be incorporated into *Mansfield 2035 – a vision for the future* when that document is reviewed.

9.0 ACTIONS

The relevant Council departments to allocate the required resources to ensure implementation of the Roadside Conservation Management Plan.

10.0 REFERENCES

City of Greater Shepparton Council, Roadside Management Strategy, 2008.

Country Fire Authority Act 1958

Country Fire Authority, On the Land, Agricultural Fire Management Guidelines, 2007.

Country Fire Authority, Roadside Fire Management Guidelines, 2001.

Department of Environment and Primary Industries: http://www.depi.vic.gov.au/agriculture-and-food/pests-diseases-and weeds/weeds/invasive-plant-classifications/weed-classification-victoria (Jan 2014)

Environment Protection Authority New South Wales, Stormwater Management for Road Construction and Maintenance, http://www.environment.nsw.gov.au/stormwater/ whatdo/local+councils/roads.htm.

Environment Protection Authority Victoria, Best Practice Environmental Management – Environmental Guidelines for Major Construction Sites, 1996.

Goulburn Broken Catchment Roadside Biodiversity Risk Management Protocols, 2008.

Goulburn Broken Native Vegetation Management Strategy, GBCMA 2003.

Goulburn Broken Invasive Plants and Animals Strategy 2010 2015

Goulburn Broken Regional Catchment Strategy, GBCMA 2003.

Mansfield Shire Council Community Local Law, 2008.

Mansfield Shire Council Municipal Fire Management Plan, 2013.

Mansfield Shire Council Road Management Plan, 2008.

Mansfield Planning Scheme

Permitted clearing of native vegetation - Biodiversity assessment guidelines, September 2013.

Planning and Environment Act 1987

Planning Practice Notes, DEPI 2006.

RCAC, 1995, Roadside Assessment Handbook, Roadsides Conservation Advisory Committee

Revegetation Guide for the Goulburn Broken Catchment, DNRE 2001.
Road Management Act 2004

VicRoads, Roadside Handbook, An Environmental Guide for Road Construction and Maintenance, 2006.

Victorian Biodiversity Atlas, Species Summary List, Department of Environment and Primary Industries, Jan 2014.

Victoria's Native Vegetation Management: A Framework for Action, 2002.

APPENDIX 1 - AGENCY CONTACT DETAILS

Department of Environment and Primary Industries

General Enquires	136 186
Alexandra	
Native Vegetation Officer – referral for native vegetation removal applications	03 5772 0200
Benalla	
Native vegetation seed and flower harvesting permits	03 5761 1611
Wild-dog management	0428503169
Mansfield	
Game hunting permit	03 5733 1200
Timber harvesting operation licences	
Tatura	
Weed control management	03 58335222
Toolangi	
Wildlife management	0429978286
Snobs Creek	
Pest animals (non native)	03 57742217

Goulburn Broken Catchment Management Authority

Shepparton (head office)	
Referral for works in waterways applications	03 5820 1100
Yea	
Local office for revegetation works along waterways	03 5736 0100

APPENDIX 2 – RARE & THREATENED FLORA AND FAUNA LIST FOR THE GOULBURN BROKEN CATCHMENT

FAUNA

Presumed extinct

Southern Bettong
White-footed Rabbit-rat

Regionally extinct

Southern Purple-spotted Gudgeon
Rufous Bettong
Rufous-bellied Pademelon

Critically Endangered

Barred Galaxias
Bluenose Cod (Trout Cod)
Plains-wanderer
Australian Painted Snipe
Australian Bustard
Regent Honeyeater
Spotted Bowerbird
Mountain Pygmy-possum
Small Ant Blue
Golden Sun Moth
Helmeted Honeyeater
Giant Bullfrog
Spotted Tree Frog
Alpine Tree Frog

Endangered

Broad-shelled Turtle
Gippsland Burrowing Crayfish
Dwarf Galaxias
Macquarie Perch
Freshwater Catfish
Malleefowl
Gull-billed Tern
Curlew Sandpiper
Bush Stone-curlew
Little Egret
Intermediate Egret
Little Bittern
Australasian Bittern
Freckled Duck
Blue-billed Duck
Grey Falcon
Barking Owl
Masked Owl
Superb Parrot
Swift Parrot

Endangered continued

Grey-crowned Babbler
Spot-tailed Quoll
Squirrel Glider
Leadbeater's Possum
Broad-toothed Rat
Smoky Mouse
Striped Legless Lizard
Lace Monitor
Alpine Bog Skink
Large Ant Blue
Carpet Python
Brown Toadlet
Rugose Toadlet
Growling Grass Frog

Vulnerable

Murray-Darling Rainbowfish
Australian Grayling
Flat-headed Galaxias
Murray Cod
Yarra Pygmy Perch
Silver Perch
Southern Pygmy Perch (Murray-Darling lineage)
Planarian
Red-chested Button-quail
Lewin's Rail
Baillon's Crake
Fairy Prion
Black-browed Albatross
Indian Yellow-nosed Albatross
Shy Albatross
Pacific Golden Plover
Inland Dotterel
Eastern Curlew
Wood Sandpiper
Common Sandpiper
Common Greenshank
Marsh Sandpiper
Brolga
Eastern Great Egret
Australasian Shoveler
Hardhead
Musk Duck

Vulnerable continued	Near threatened continued
Grey Goshawk	Turquoise Parrot
White-bellied Sea-Eagle	Azure Kingfisher
Square-tailed Kite	Red-backed Kingfisher
Black Falcon	Black-eared Cuckoo
Powerful Owl	Hooded Robin
Sooty Owl	Crested Bellbird
Major Mitchell's Cockatoo	Spotted Quail-thrush
Regent Parrot	Diamond Firetail
Scarlet-chested Parrot	Long-toed Stint
White-throated Needletail	Pectoral Sandpiper
Ground Cuckoo-shrike	White-footed Dunnart
Chestnut-rumped Heathwren	Fat-tailed Dunnart
Speckled Warbler	Eastern Pygmy-possum
Painted Honeyeater	Southern Myotis
Purple-gaped Honeyeater	Woodland Blind Snake
Brush-tailed Phascogale	Pacific Gull
Common Dunnart	Brown Treecreeper (south-eastern ssp.)
Greater Glider	
Grey-headed Flying-fox	
Eastern Horseshoe Bat	
Bearded Dragon	
Glossy Grass Skink	
Bandy Bandy	
Tussock Skink	
Black-tailed Godwit	
Southern Toadlet	
Near threatened	
Murray Spiny Crayfish	
Golden Perch	
Emu	
Little Button-quail	
Diamond Dove	
Common Diving-Petrel	
Pied Cormorant	
Whiskered Tern	
Caspian Tern	
White-fronted Tern	
Latham's Snipe	
Australian Pratincole	
Glossy Ibis	
Royal Spoonbill	
Nankeen Night Heron	
Magpie Goose	
Spotted Harrier	

Source: Victorian Biodiversity Atlas, Species Summary List, Department of Environment and Primary Industries, Jan 2014.

FLORA

Presumed extinct

Buffalo Leek-orchid

Mount Hope Guinea-flower

Endangered

Yarran Wattle
Weeping Myall
Mueller Daisy
Bald-tip Beard-orchid
Yellow Hyacinth-orchid
Buxton Gum
White-budded Red-gum
Rough Eyebright
Winged Peppercress
Lanky Buttons
Round-leaf Pomaderris
Small Scurf-pea
Tough Scurf-pea
Long-tail Greenhood
Southern Sandalwood
Stiff Groundsel
Large-headed Fireweed
Violet Swainson-pea
Slender Darling-pea
Red Swainson-pea
Mountain Swainson-pea
Downy Swainson-pea
Plump Swamp Wallaby-grass
Pale Plover-daisy
Small-leaf Bluebush
Turnip Copperburr
Crimson Spider-orchid
Purple Eyebright
Slender Water-milfoil
Swamp Leek-orchid
Spiny-fruit Saltbush
Jericho Wire-grass
Grey Billy-buttons
Lima Stringybark
Purple Wire-grass
Spiny Rice-flower
Matted Flax-lily
Slender Love-grass
Selma Saddle Grevillea
Lace Leek-orchid
Petite Leek-orchid

Vulnerable

Ausfeld's Wattle
Western Silver Wattle
Nealie
Mallee Golden Wattle
Jerry-jerry
Buloke Mistletoe
Native Wintercress
Austral Moonwort
Dookie Daisy
Water Shield
Western Water-starwort
Plump Windmill Grass
Small Milkwort
Downs Nutgrass
Lax Flat-sedge
Straw Wallaby-grass
Silky Umbrella-grass
Umbrella Grass
Golden Cowslips
Swamp Diuris
Purple Diuris
Trailing Hop-bush
Cane Grass
Long Eryngium
Spotted Gum
Common Fringe-sedge
Clover Glycine
Narrow Goodenia
Cottony Cassinia
Slender Club-sedge
Silver Tea-tree
Button Rush
Salt Paperbark
Ridged Water-milfoil
Wavy Marshwort
Velvet Daisy-bush
Australian Broomrape
Tree Geebung
Dainty Phebalium
Grey Rice-flower
Sharp Mountain Tussock-grass
Green Leek-orchid
Sparkling Mint-bush
Leafy Greenhood

Vulnerable continued

Scented Bush-pea
Swamp Buttercup
Alpine Pennywort
Twiggy Sida
Western Rat-tail Grass
Crimson Sun-orchid
Austral Toad-flax
Yellow-tongue Daisy
Wine-lipped Spider-orchid
Swamp Star
Beechworth Silver Stringybark
Striped Water-milfoil
Stony Bush-pea
Large Rustyhood
Riverina Daisy
Pale Swamp Everlasting
Pepper Grass
Silky Swainson-pea
Eastern Bitter-cress
Euroa Guinea-flower
Late-flower Flax-lily
Austral Crane's-bill
Delicate Crane's-bill
Fireweed Groundsel (Euroa variant)
Arching Flax-lily
Pale Hickory-wattle
Timbertop Wattle
Midlands Spider-orchid
Pale Flax-lily

Rare

Rough Daisy-bush
Sharp Greenhood
Silky Golden-tip
Alpine Wattle
Deane's Wattle
Bent-leaf Wattle
Dwarf Silver Wattle
Hickory Wattle
Spur-wing Wattle
Whirrakee Wattle
Snow Aciphyll
Alpine Blown-grass
Mueller's Bent
Rough Blown-grass
Common Spleenwort

Rare continued

Narrow-leaf Star-hair
Mealy Saltbush
Mountain Banksia
River Leafless Bossiaea
Baw Baw Daisy
Tiny Daisy
Winged Water-starwort
Blue Burr-daisy
Yellow Burr-daisy
Alpine Marsh-marigold
Forest Sedge
Alpine Sedge
Carpet Sedge
Broad-leaf Flower-rush
Bronze Bird-orchid
Common Sour-bush
Alpine Colobanth
Turquoise Coprosma
Snow Coprosma
Bear's-ear
Brittle Bladder-fern
Crag Wallaby-grass
Small-flower Wallaby-grass
Thick Bent-grass
Brown Beetle-grass
Snow Pennywort
Australian Anchor Plant
Broad-lip Diuris
Hairy Hop-bush
Alpine Sundew
Mountain Coral Heath
Snow Heath
Bald-seeded Willow-herb
Mountain Willow-herb
Coccid Emu-bush
Spotted Emu-bush
Common Pipewort
Silver Stringybark
Kamarooka Mallee
Mallee Ash
Omeo Gum
Spinning Gum
Blue Mallee
Yarra Gum
Hairy Eyebright

Rare continued	Rare continued
Veiled Fringe-sedge	Strawberry Buttercup
Small-flower Mud-mat	Eichler's Buttercup
Mat Cudweed	Gunn's Alpine Buttercup
Cliff Cudweed	Dwarf Buttercup
Spiked Goodenia	Serpent Heath
Western Golden-tip	Dwarf Bitter-cress
Creeping Grevillea	Mossy Knawel
Mountain Needlewood	Branching Groundsel
Ovens Everlasting	Alpine Groundsel
Sky Lily	Cane Spear-grass
Stalked Guinea-flower	Alpine Spear-grass
Fir Clubmoss	Smooth Rice-grass
Slender Violet-bush	Long Pink-bells
Hydrilla	Crested Sun-orchid
Fog Club-sedge	Fringed Sun-orchid
Tufted Club-sedge	Alpine Trachymene
Sickle-leaf Rush	Small Burr-grass
Sand Rush	Rye Beetle-grass
Broom Scale-rush	Lilac Berry
Chinese Lespedeza	Grassland Velleia
Sharp-leaf Woodrush	Milfoil Speedwell
Tussock Woodrush	Alpine Westringia
Spreading Clubmoss	Baw Baw Berry
Giant Honey-myrtle	Glandular Early Nancy
Small Monkey-flower	Dark Wire-grass
Smooth Minuria	Tadgell's Daisy
Spiny Lignum	Naked Beard-orchid
Waterbush	Dwarf Brooklime
Stalked Adder's-tongue	Gippsland Hemp Bush
Tuft-rush	Golden Sour-bush
Alpine Tuft-rush	Broom Bitter-pea
Snowdrop Wood-sorrel	Bristly Greenhood
Mountain Phebalium	Mallee Annual-bluebell
Rock Tussock-grass	Rosemary Grevillea
Long Podolepis	Short-bristle Wallaby-grass
Broad Shield-fern	Deane's Wattle
Golden Pomaderris	Common Spleenwort
Dense Mint-bush	Subalpine Baeckea
Sikh's Whiskers	Velvet Apple-berry
Scaly Greenhood	Slender Pink-fingers
Alpine Bush-pea	Mugga
Small-leaf Bush-pea	Avon Tussock-grass
Flat-leaf Bush-pea	Parsley Xanthosia
Cupped Bush-pea	Alpine Sunray

Rare continued	Poorly Known
Victorian Snow-daisy	Large River Buttercup
Carpet Snow-daisy	Eastern Speedwell
Green Billy-buttons	Common Joyweed
Small-flower Mat-rush	Swamp Water-starwort
Baw Baw Pepper	Slender Bitter-cress
Dusty Daisy-bush	Green-top Sedge
Dwarf Sickle-fern	Yelka
Alpine Phebalium	Cotton Panic-grass
Forest Phebalium	Pale Spike-sedge
Squat Picris	Granite Love-grass
Alpine Bootlace Bush	Summer Fringe-sedge
Fringed Rice-flower	Short-awned Wheat-grass
Highland Bush-pea	Hypsela
Silver Stringybark	Bundled Peppercress
Southern Swainson-pea	Native Peppercress
Alpine Trachymene	Austral Trefoil
Slender Water-ribbons	Leafless Bluebush
Riverina Bitter-cress	Smooth Nardoo
Forest Bitter-cress	Netted Daisy-bush
Fuzzy New Holland Daisy	Woolly Knotweed
Rising Star Guinea-flower	Galvanized Burr
Woolly Wattle	Narrawa Burr
Snowfield Groundsel	Rough Twig-sedge
Large-leaf Cinnamon-wattle	Bluish Raspwort
Green Scentbark	Single Bladderwort
Goldfield Boronia	Water Blinks
Mountain Cassinia	Curved Rice-flower
Soft Crane's-bill	Native Couch
Pale-flower Crane's-bill	Perennial Blown-grass
Toothed Leionema	Pale Grass-lily
Royal Grevillea	Frosted Goosefoot
Lake Mountain Grevillea	Slender Tick-trefoil
Alpine Buttons	Curved Rice-flower
Cotton Sneezeweed	Plain Quillwort
Moroka Candlebark	Yellow Star
Tall Apple-moss	Tall Club-sedge
Crisped Mitre-moss	Grey Spike-sedge
Brown's Mitre-moss	Blue-leaf Tussock-grass
Cliff Waxwort	Ferny Small-flower Buttercup
Wavy Fork-moss	Annual Buttercup
Floodplain Fireweed	Black Roly-poly
Rough Cassinia	Dark Roly-poly
Dwarf Cassinia	Sticky New Holland Daisy
	Plains Joyweed

Poorly Known continued	Species listed under the Flora and Fauna Guarantee Act 1988 (FFG Act)
Common Cinnamon-wattle Greenish-flower Vanilla-lily Slender Bindweed Swan-neck Moss Wimmera Bundy Snowy Colobanth Desert Bedstraw	Fauna Ancient Greenling Common Bent-wing Bat Apostlebird Flora Buloke Hairy Tails

Source: Victorian Biodiversity Atlas, Species Summary List, Department of Environment and Primary Industries, Jan 2014.

APPENDIX 3 – ROAD CONSTRUCTION AND MAINTENANCE ENVIRONMENTAL MANAGEMENT CHECKLIST

Major construction works undertaken by external contractor	✓	**Responsibility**
Contract Referred to Planning or Environment staff for environmental assessment 3 months prior to project commencement		Engineering Manager
On site inspection involving Project Coordinator, Contractor Project/Site Manager - outcomes recorded on file		Engineering Manager
Contractor aware of and familiar with Councils Roadside Conservation Management Plan?		Engineering Manager
Contractor submitted Environmental Management Plan outlining strategies for: • minimising disturbance to native vegetation • preventing soil and water pollution • erosion control • management of excess spoil • importation of soil materials • preventing spread of weeds • minimising disturbance to native fauna • minimisation disturbance to cultural heritage • waste management – reduce, reuse, recycle • planting offsets/rehabilitation of disturbed areas • emergency procedure • monitoring and evaluation reporting		Engineering Manager
Environmental Management Plan referred to Environment staff		Engineering Manager
Planning Permit Required? See Planning or Environment staff		Engineering Manager
Has a site map been developed by contractor showing • 'vegetation removal zones', • 'construction zone' • 'no go zone' • Identified weed infestation zones • rare and threatened species		Engineering Manager
Is water being used 'fit for purpose'?		Engineering Manager
Has an onsite inspection been arranged on the finalisation of the project to ensure compliance with the Environmental Management Plan?		Engineering Manager

Checklist adapted from the Goulburn Broken Catchment Roadside Biodiversity Risk Management Protocols, 2008.

Road construction and maintenance undertaken by Council staff	✓	**Responsibility**
If the roadside has a high conservation value has the construction or maintenance project been referred to Environment staff for environmental assessment		Rural Roads Supervisor
Are the staff involved in the works aware of environmental management operational techniques as recommended by the Roadside Conservation Code of Practice for Field Services Staff and Contractors Handbook?		Rural Roads Supervisor
Has a site map been developed indicating special areas such as rare and threatened species and weed infestations?		Rural Roads Supervisor
Is any native vegetation removal planned? Does the removal require a planning permit and offsets? – see Planning or Environment staff		Rural Roads Supervisor
If the roadside has a high conservation value, have methods for excess spoil disposal and management of ground vegetation debris been developed and agreed on?		Rural Roads Supervisor

APPENDIX 4 - FLOWCHARTS

Please note: The Routine Road Maintenance Envelope Flowcharts have been adapted from the Greater Shepparton City Council Roadside Management Strategy 2008.

Routine Roadside Maintenance Vegetation Removal Flowchart

This flowchart applies to any native vegetation that has been deemed to be an issue to road safety.

Only vegetation within the road maintenance envelope can be considered for removal.

Native vegetation must be treated with minimum disturbance.

Figure 1. Vegetation Maintenance Envelope

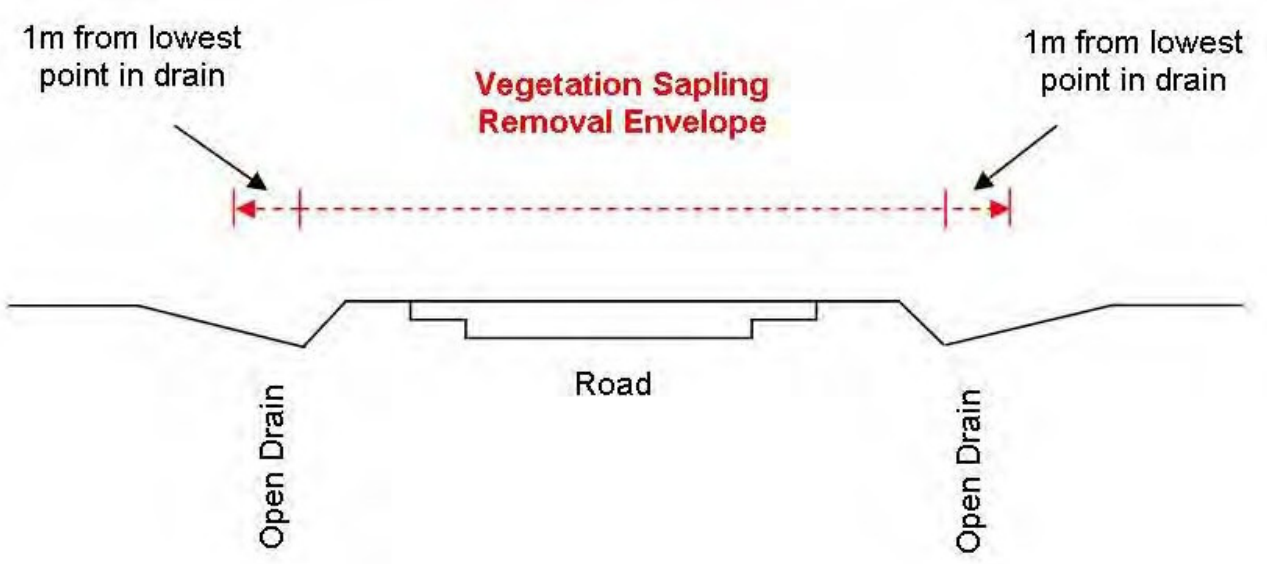
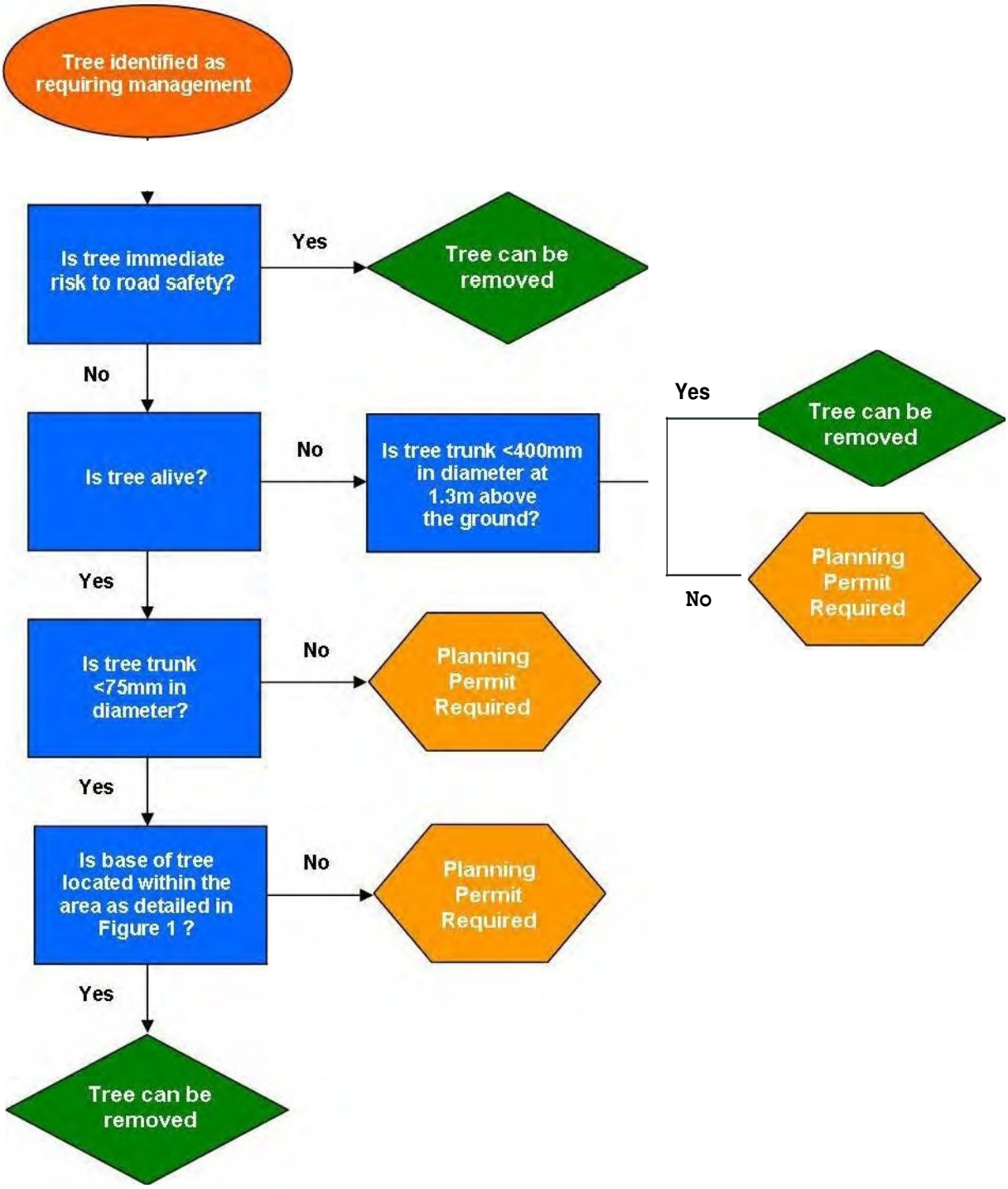


Figure 2. Vegetation Maintenance Envelope Decision Guidelines Flowchart



Routine Roadside Maintenance Tree Lopping Flowchart

This flowchart applies to tree branches that have been deemed to be an issue to road safety.

Only tree branches within the specified lopping maintenance envelope can be considered for removal.

Branches must be pruned with minimum disturbance.

Figure 1. Tree Branch Lopping Maintenance Envelope

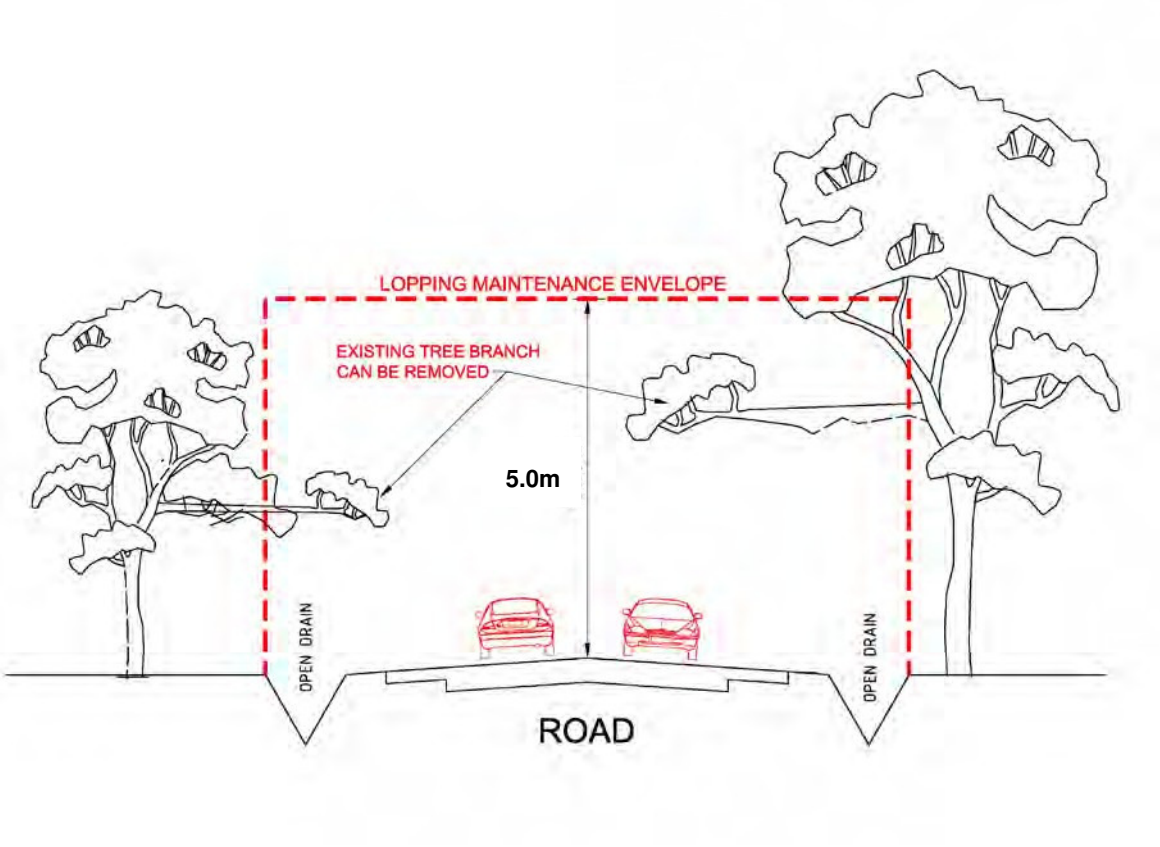
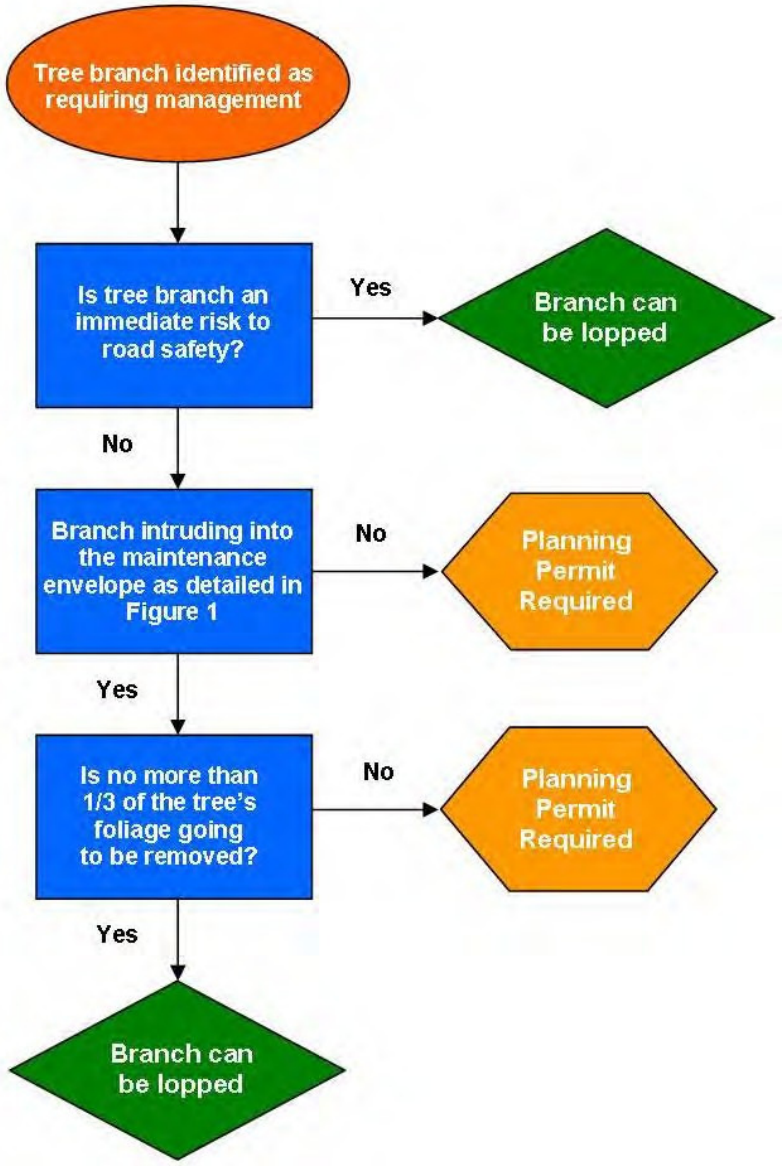


Figure 2. Tree Branch Lopping Maintenance Envelope Decision Guidelines Flowchart



APPENDIX 5. NATIVE VEGETATION-TECHNICAL INFORMATION SHEET.

Native Vegetation – Technical information sheet

Defining an acceptable distance for tree retention during construction works

Native vegetation technical information sheet

This information sheet is provided to clarify and supplement the information contained in *Victoria's Native Vegetation Management: A Framework for Action* (DNRE 2002) and the *Guide Assessment of Referred Planning Permit Applications* (DSE 2007).

Defining an acceptable distance for tree retention during construction works

Construction projects that involve earthworks can cause indirect losses of native vegetation. Of particular concern is the longer-term impact of soil compaction and excavation (e.g. trenching for pipelines, cabling, etc) close to trees and the effects on tree health.

To prevent indirect losses of native vegetation it is recommended that Tree Retention Zones (TRZs) be implemented for the duration of construction activities.

A TRZ is a specific area above and below the ground, with a radius 12 x the Diameter at Breast Height (DBH) (see figure 1). The TRZ of trees should be no less than 2 m or greater than 15 m. The TRZ of tree ferns should not be less than 1 m outside the crown projection.

It is recommended that during construction activities, physical barriers be erected to delineate the TRZ.

During construction, the following activities should be excluded from the TRZ:

- machine excavation including trenching
- directional drilling that is less than 600 mm deep
- excavation for silt fencing
- storage
- preparation of chemicals, including preparation of cement products
- parking of vehicles and plant
- refuelling
- dumping of waste
- placement of fill
- temporary or permanent installation of utilities and signs
- physical damage to the tree.

By default, a tree will be considered lost and require an offset if one of the above activities occurs over more than 10% of the total area of the TRZ. However, if a qualified arborist confirms that the specific works will not significantly damage the tree will be considered retained and no offset will be required.

In some cases construction works may occur within areas that have been subject to previous soil disturbance through ongoing agricultural activities. Where work within the TRZ results in no additional soil disturbance than has occurred through previous ongoing agricultural activities, such as cropping or cultivation, the trees will not be considered lost and no offset will be required.

Please note, for a tree to be used as an offset for other tree clearing, it must meet the definition of Protection of a tree[1] on page 28 of the *Guide for Assessment of Referred Planning Permit Applications* (DSE 2007).

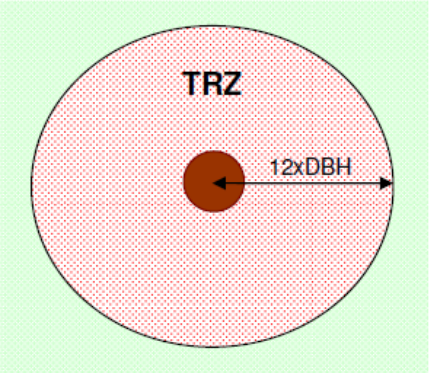
[1] The *Guide for Assessment of Referred Planning Permit Applications* (DSE 2007) (pg. 28) defines "protection of a tree" to be an area with twice the canopy diameter of the tree fenced and protected from adverse impacts: grazing, burning and soil disturbance not permitted, fallen timber retained, weeds controlled, and other intervention and/or management if necessary to ensure adequate natural regeneration or planting to occur.

www.dse.vic.gov.au/nativevegetation

State Government Victoria

Defining an acceptable distance for tree retention

Figure 1 Definitive lost/retained boundary set by Tree Retention Zone.



References

Department of Natural Resources and Environment (NRE 2002). *Victoria's Native Vegetation Management: A Framework for Action*. Department of Natural Resources and Environment, East Melbourne.

Department of Sustainability and Environment (2007). *Guide for Assessment of Referred Planning Permit Applications*. Victorian Government, Department of Sustainability and Environment, East Melbourne.

Further information

For further information on native vegetation, please contact the DSE Customer Service Centre on **136 186** or visit the DSE website at: www.dse.vic.gov.au/nativevegetation

Published by the Victorian Government Department of Sustainability and Environment, Melbourne, September 2011

Authorised by the Victorian Government, 8 Nicholson Street, East Melbourne

For more information contact the DSE Customer Service Centre 136 186

www.dse.vic.gov.au/nativevegetation

MANSFIELD SHIRE

MANSFIELD SHIRE COUNCIL

ROADSIDE CONSERVATION CODE OF PRACTICE HANDBOOK FOR FIELD SERVICES STAFF AND CONTRACTORS

GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

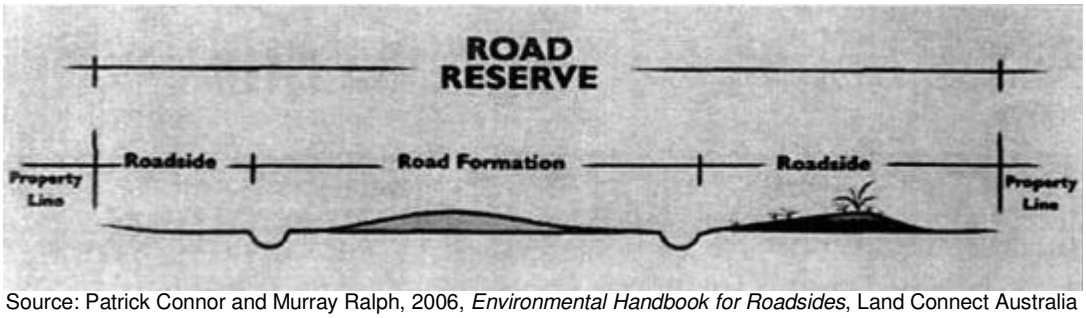
This project received funding support from the Goulburn Broken Catchment Management Authority through the Commonwealth Natural Heritage Trust program

Australian Government

1.0 INTRODUCTION

1.1 What is a Roadside?

A road reserve is established to provide a safe and effective network for vehicle movement and access for utility services. The roadside is usually the area between a property boundary and the road drain as detailed in the diagram below.



Source: Patrick Connor and Murray Ralph, 2006, *Environmental Handbook for Roadsides*, Land Connect Australia

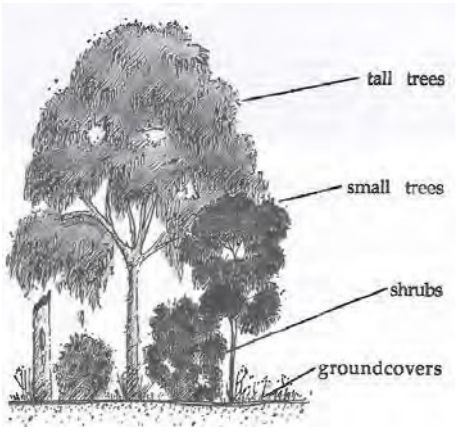
1.2 Why is Roadside Conservation Important?

- Undisturbed roadsides support a high diversity of native animals and plants.
- Native vegetation on roadsides often includes some of the few remaining examples of intact habitat in highly developed landscapes.
- Roadsides often provide the only wildlife corridors to other vegetation remnants.
- In the Goulburn Broken Catchment, there are native vegetation species known only to remain on roadsides, and native wildlife that would otherwise not exist in some areas without roadside habitats.
- Native vegetation is easier to manage than introduced vegetation.
- Native grasses have lower fuel loads and therefore lower fire risk than introduced species.

2.0 GENERAL PRINCIPLES

Trees are good – bush is better!

Native vegetation includes trees, shrubs, grasses and groundcovers. Some vegetation habitats are naturally devoid of some layers such as native grasslands. All layers of bush have equal value.



Source: Patrick Connor and Murray Ralph, 2006, *Environmental Handbook for Roadsides*, Land Connect Australia

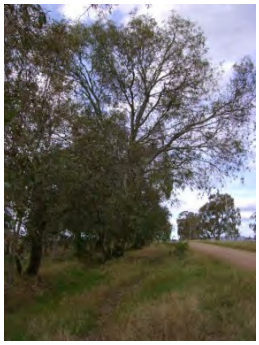
General principles for roadside conservation include:

- Conserve existing native vegetation.
- Encourage re-establishment of native vegetation by conserving regeneration.

- Revegetate priority roadsides to create wildlife corridors and protect rare and threatened plants and animals.
- Acknowledge the importance roadside vegetation plays in providing habitat for native wildlife.
- Use best practice vegetation management to ensure safety of road users
- Conserve and protect rare and threatened plants and animals.

3.0 CONSERVATION VALUE OF ROADSIDES

A vehicle-based assessment of all roads outside townships, for which Council is the responsible authority, has been undertaken to determine a conservation value of high medium or low as outlined in the table below. A Roadside Conservation Values Map for specific roads is available through Council's Environment staff.

High Conservation Value ▪ Low disturbance ▪ Canopy, mid and lower native vegetation layers present (including regeneration) ▪ Low weed presence ▪ Native vegetation occurs across majority of roadside ▪ Includes a range of habitats ▪ May form a wildlife corridor ▪ May provide habitat for rare or threatened species ▪ Generally requires little maintenance	 Rifle Butts Road, Mansfield
Medium Conservation Value ▪ Moderate disturbance ▪ Native vegetation occurs mainly in patches ▪ Some regeneration ▪ Few habitat features	 Mt Battery Road, Mansfield
Low Conservation Value ▪ Substantially disturbed or modified ▪ Predominately non-native vegetation ▪ Little to nil regeneration ▪ Few habitat features ▪ Potentially an increased fire risk	 Pollards Road, Boorolite

4.0 GUIDELINES FOR ROADSIDE ACTIVITIES

4.1 Road Construction and Maintenance

- ***Assess Site Prior Work***

An assessment of the road construction/maintenance site will identify areas of environmental significance. A checklist contained in Appendix 3 will assist Council and Contractor staff to conduct an assessment.

Contractors must arrange an initial site inspection with Council's Engineering and Environment staff.

Council's Rural Roads Supervisors must conduct an initial site inspection for works undertaken by Council, referring to Environment staff for high conservation value roadsides and as required for other works.

- ***Minimise Disturbance to Native Vegetation***

Vegetation Removal

Native vegetation includes trees, shrubs, grasses and ground covers. Native vegetation removal on roadsides may require a Planning Permit. Consult your supervisor to determine if permits are required and if they have been obtained before commencing any proposed native vegetation removal, destruction or lopping.
See Appendix 1 for the vegetation Maintenance Envelope and the tree Branch Lopping Maintenance Envelope. See Appendix 4 Native Vegetation-Technical information sheet.

For non routine works, vegetation approved for removal must be identified by highly visible paint or tape.

Lopping Trees

Careful pruning of overhanging branches can often reduce the need for complete tree removal. Within the Maintenance Envelope up to one third of a trees foliage can be lopped without the need for a permit.

See Appendix 1 for approved routine roadside maintenance tree branch lopping parameters.

Consider the following before undertaking any lopping or pruning of any trees:

- safety of staff and road users
- the effect of the tree pruning on the appearance of the roadside
- the historical significance of the tree (Works Supervisor consult staff from Council's Planning unit).

Stumps and logs should be retained for animal habitat and decomposition wherever possible on all roadsides of high and medium conservation value. Fine fuels from lopped branches (eucalyptus leaves and fine twigs) can be mulched and spread back over the area for decomposition.

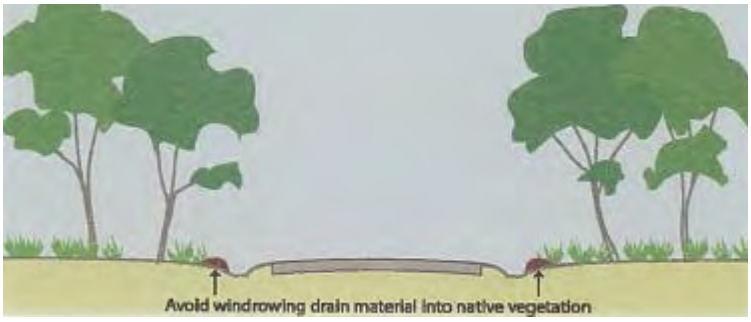
Lopping must only be undertaken using industry standard practices by appropriately qualified staff or a qualified Arborist.

Fill and Spoil

Tree roots need to access water, nutrients and space to grow. Storing fill and driving even small vehicles around trees can damage fine roots and cause soil compaction. This can cause root damage, lack of oxygen and changes to water runoff patterns that can damage or kill trees.

Do not place fill or windrow spoil on native ground covers, grasses or tree roots as it will suffocate them and ultimately cause the vegetation to decline in health and perish.

Remove all spoil from high conservation roadsides and dispose of off-site at an approved stockpile site (see Appendix 2)



Diagrams sourced from VicRoads Roadside Handbook, An Environmental Guide for Road Construction and Maintenance 2006

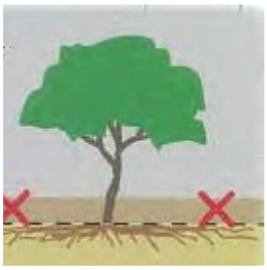
Machinery Operation

Machinery can cause considerable damage to native vegetation in a very short period of time.

In areas of high conservation value, machinery must only be operated on the road surface and property access points. In other areas, machinery must be restricted to the road surface, property access points and areas clear of native vegetation and weed infestations.

Machinery size and type must be suited to the works site. Large machinery working in a small space will increase the likelihood of accidental destruction of vegetation.

Road design



Use designs that preserve tree roots

Diagram sourced from VicRoads Roadside Handbook, An Environmental Guide for Road Construction and Maintenance 2006

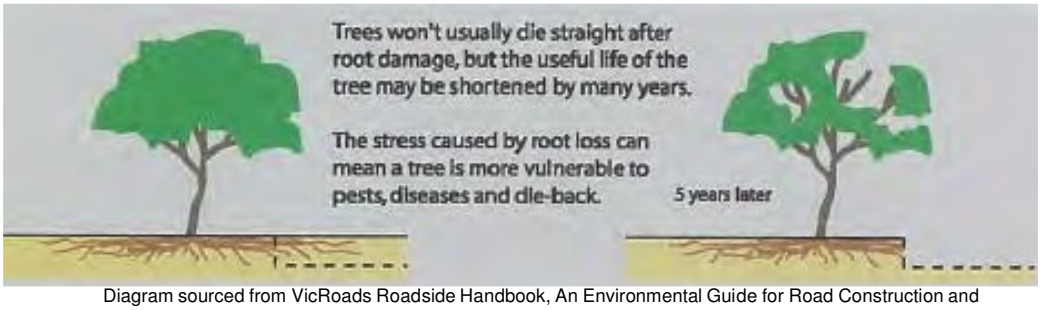


Diagram sourced from VicRoads Roadside Handbook, An Environmental Guide for Road Construction and Maintenance 2006

Logs, Branches and Timber Debris

Chapel Hill Road, Boorolite

Avoid '*tidying up*' debris timber into piles. Piles harbour pest animals and weeds giving the false impression that trees have been removed. Tree logs and branches left on a roadside in a 'natural' scatter will provide habitat for native wildlife. Consult supervisors on the procedure for managing windfall timber created during extreme storm events.

Stockpiles

- Minimise the use of stockpiles by utilising best practice work methods to avoid double-handling of materials.
- Only place stockpiles at Council designated locations (Appendix 2); these should have safe traffic access but not effect visual amenity.
- Stockpiles must only be located on roadsides that have a low conservation value.
- Do not store materials within drip lines of existing trees or within drainage lines.
- The limits of each site must be defined by highly visible tape or temporary fencing.

➢ *Control Erosion*

Erosion is a process where exposed top soil is removed by the elements, such as wind and water movement. This produces sediment which silts drains, creeks and rivers.

The risk of erosion can be reduced by implementing the following management options:

- Minimise the amount of exposed surfaces and areas being actively worked at the same time.
- Minimise the timing between clearing and stripping of the site. Covering exposed surfaces with erosion control materials as each section of the works is complete will protect the soil.
- Installing and maintaining a combination of silt fences, jute matting and water diversion devices, such as catch drains, will maximise erosion control.
- Treat open drains to prevent erosion before adjacent ground is disturbed.
- Cover exposed surfaces such as stockpiles, with mulch or erosion control matts.
- Coordinate work schedules when more than one party is working on a site. This will ensure delays in construction activities are minimised, reducing the time disturbed land remains unstable.

- Keep drainage line soil loose to enable prompt revegetation.
- Program construction activities to avoid periods of severe weather events such as storms and heavy rain, to minimise erosion where soil is exposed
- Continually assess the effectiveness of erosion control measures and make improvements where necessary.

Topsoil stock pile surrounded by a silt fence

Picture sourced from VicRoads Roadside Handbook, An Environmental Guide for Road Construction and Maintenance 2006

➢ *Prevent Spread of Weeds*

Noxious and environmental weeds can be spread during road construction and maintenance projects via machinery, vehicles, water and movement of soil. Council is obligated under the *Catchment and Land Protection Act 1994* to prevent the spread of noxious weeds.

The spread of weeds must be controlled by:

- Beginning work in areas of high conservation value and then moving to areas of lower conservation value.
- Treating a weed infestation in a project construction zone with a chemical application before the project commences; refer Sections 4.3 and 4.4 Spraying and Slashing.
- Brushing/blowing/washing machinery before leaving areas of weed infestation.
- Brushing/blowing/washing machinery before entering areas which have low weed infestation and/or an area of intact native vegetation in the lower, mid and upper storeys.

Machinery should be washed/blowed/brushed down at least 500m from creeks and vegetation of high conservation value.

Machinery wash-down unit

Picture sourced from VicRoads Roadside Handbook, An Environmental Guide for Road Construction and Maintenance 2006

- ***Minimise Disturbance to Native Animals***

Roadside native vegetation provides a habitat for native wildlife and provides corridors for the movement of animals. Efforts to protect fauna habitats, tend to focus on tree protection; however, many species of native fauna live at ground level. It is important to note that native wildlife includes soil organisms, insects, mammals, birds and reptiles.

Minimise disturbance by:

- Avoiding and minimising machinery movement in vegetated areas.
- Making project site staff aware of the potential presence of fauna.
- Retaining trees with hollows, including dead trees and fallen logs and branches at ground level.
- Avoiding tree felling during nesting season, unless the trees are deemed to pose an immediate risk to safety.

- ***Minimise Disturbance to Cultural Heritage***

Road construction and maintenance activities that involve ground disturbance, and/or tree removal, may impact cultural heritage objects and places. Mansfield Shire Council is obligated by legislation to protect both indigenous and non-indigenous cultural heritage sites.

Identified sites and objects must be marked on a site map that also identifies other significant areas, such as, 'no go', 'construction' and native vegetation removal and weed infestation zones.

Work should cease immediately if a cultural heritage site or artefact is found, and the works supervisor must contact the Engineering Manager.

- ***Manage Waste and Litter***

These measures must be implemented for waste management;

- Wherever possible do not take material packaging on site.
- Remove waste from site and dispose at a waste transfer station.
- Storage, transport, use and disposal of hazardous materials must be in accordance; with the manufacturer's guidelines, material safety data sheet and applicable legislation.

- Reuse material such as topsoil, mulch, large logs (for wildlife habitat) on site where possible.
- Weather-proof rubbish and recycling disposal facilities must be available on.

➢ ***Emergency Procedure***

If an environmental incident occurs as a direct result of road construction and maintenance works, immediately inform the works supervisor who must then inform Council's Risk Management Officer.

4.2 Fencing

If fencing works are undertaken by Council (for Council managed land) the following works guidelines must be implemented:

- Biodiversity assets and roadside conservation value must be identified and understood by those undertaking the work.
- The fence line should be re-aligned, relocated or vegetation incorporated into the fence design before native vegetation removal is considered.
- A staff member from Council's Planning or Environment Units must be consulted if native vegetation removal is deemed unavoidable.
- Works and machinery operation must be conducted from the Council managed/ owned property side of the road reserve boundary.
- The extent and location of works must be clearly defined and understood by those undertaking the work.
- Waste must not be left on the road reserve.
- Erosion and sediment control measures must be in place.
- A minimum extent of grass can be slashed along the fence line (minimum of 100mm high for native grasses) if impeding work. The area must not be graded or ploughed.

4.3 Slashing

Slashing on roadsides has a high risk of removing or destroying native vegetation, incurring loss of, or damage to, habitats and causing accidental spread of weeds.

Due to the potential serious risks to biodiversity, mowing/slashing on roadsides outside of townships should be avoided wherever possible especially on roadsides of high conservation value. Native vegetation removal caused by mowing/slashing or spraying may require a Planning Permit. The works supervisor must consult staff from Council's Planning or Environment Unit if native vegetation removal, destruction or lopping is likely as a direct result of mowing/slashing.

Native vegetation must be clearly identified by high visible tape or temporary fencing prior to mowing or slashing.

Removal of grass (native or exotic) for fire prevention must comply with Council's Municipal Fire Management Plan, and be approved by Council Fire Prevention and Environment staff. Slashing/mowing of applicable areas must be undertaken by Council or approved contractor with conditions of machinery hygiene maintained to prevent weed spread. A minimum mowing height of 100mm must be timed just prior to the commencement of the Fire Hazard Period.

Mowing or Slashing must be avoided on high conservation value roadsides wherever possible.

4.4 Spraying

Spraying on roadsides has a high risk of removing or destroying native vegetation, incurring loss of, or damage to, habitats and causing accidental spread of weeds.

Herbicides should only be used to control weeds when other alternatives are not suitable.

Council staff or contractors undertaking herbicide application must have appropriate qualifications (Chemcert/ACUP).

Damaging plants other than weeds can cause greater weed problems due to larger areas of disturbance. This risk must be reduced by:

- Marking native vegetation on a site map and/or with highly visible tape or temporary fencing.
- Spraying weeds from a close distance.
- Using low pressure and large droplet size to minimise drift.
- Spraying in calm and dry weather conditions.

Broad scale spraying targeting all ground cover vegetation must not be allowed on roadsides unless approved by Council's Environment staff and Engineering Manager.

In instances where weeds sit among native vegetation, make sure weed control techniques are specific, such as:

- Drilling and filling, or cutting and painting.
- Using specific herbicides.
- Using spray hoods where possible.
- Hand pulling (where weed occurrence is minimal).

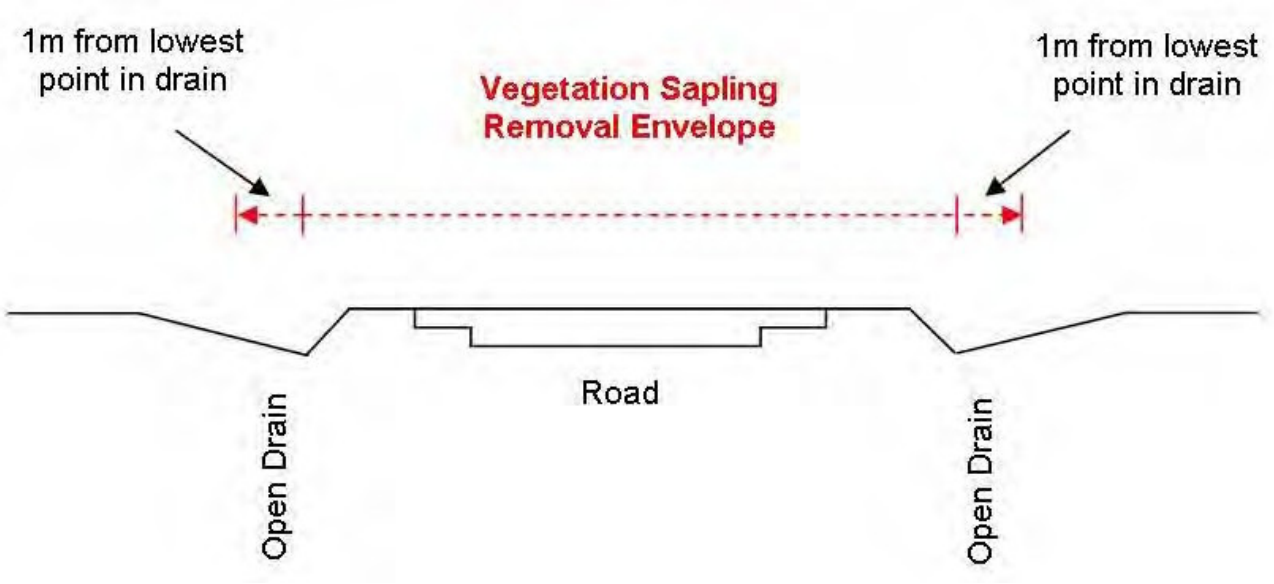
While conducting weed control works, consideration must be given to managing spread of weeds. This can be controlled by:

- Washing/blowing/brushing down machinery before leaving weed infested areas.
- Washing/blowing/brushing down machinery before entering areas which have low weed infestation.
- Beginning work in areas of low infestation then moving to areas of high infestation.

Dead vegetation created by spraying works can be left to undergo decomposition, or if considered a fire hazard, mulch and spread back over the area rather than being 'cleaned up'.

Appendix 1 - Maintenance Envelope

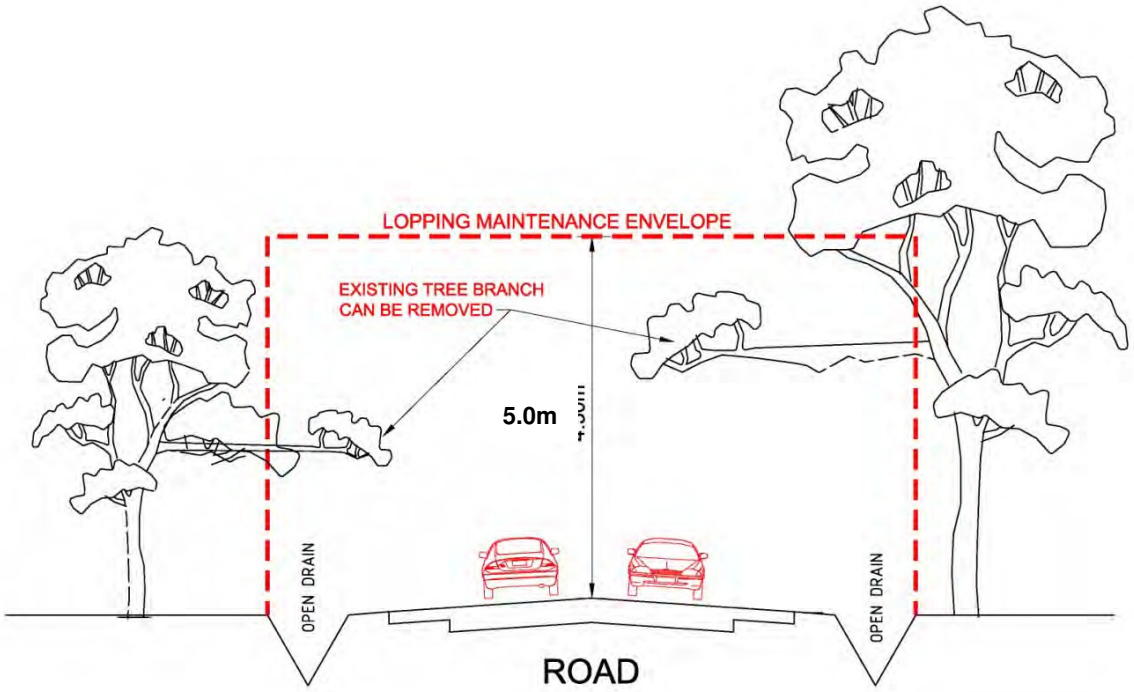
Vegetation Maintenance Envelope



Source: the Routine Road Maintenance Envelope Flowcharts have been adapted from the Greater Shepparton City Council Roadside Management Strategy 2008.

ANY other vegetation that needs to be removed that is beyond 1 metre from the lowest point in the drain MUST be approved by Council's Field Services Coordinator and the Environment Unit

Tree Branch Lopping Maintenance Envelope



ANY other vegetation that needs to be removed that is outside the lopping maintenance envelope MUST be approved by Council's Field Services Coordinator and the Environment Unit

Appendix 2 – Approved Stockpile Sites

The following sites can be used as temporary storage areas:

- Corner Old Tolmie Road and Mansfield-Whitfield Road
- Corner Barwite Road and Mansfield-Whitfield Road
- Corner Kingston Parade and Maroondah Highway
- Corner Buttercup Road and Mt Buller Road
- Corner Piries-Goughs Bay Road and Mansfield-Woods Point Road
- Mansfield-Woods Point Road just prior to Howqua Inlet township (heading to Jamieson)
- Corner of Midland Highway and Midland Link
- Midland Highway at large sign for Lake Nillahcootie
- Corner Black Swamp Road and Midland Link
- Corner Ancona Road and Maroondah Highway
- Corner of North Creek Road and Maroondah Highway
- 2 kilometres down Mansfield-Euroa Road heading towards Euroa from intersection with Maroondah Highway

Appendix 3 – Road Construction/Maintenance Environmental Assessment Checklist

Major construction works undertaken by external contractor	✓	**Responsibility**
Contract Referred to Planning or Environment staff for environmental assessment 3 months prior to project commencement		
On site inspection involving Project Coordinator, Contractor Project/Site Manager - outcomes recorded on file		
Contractor aware of and familiar with Councils Roadside Conservation Management Plan?		
Contractor submitted Environmental Management Plan outlining strategies for: • minimising disturbance to native vegetation • preventing soil and water pollution • erosion control • management of excess spoil • importation of soil materials • preventing spread of weeds • minimising disturbance to native fauna • minimisation disturbance to cultural heritage • waste management – reduce, reuse, recycle • planting offsets/rehabilitation of disturbed areas • emergency procedure • monitoring and evaluation reporting		
Environmental Management Plan referred to Environment staff		
Planning Permit Required? See Planning or Environment staff		
Has a site map been developed by contractor showing • 'vegetation removal zones', • 'construction zone' • 'no go zone' • Identified weed infestation zones • rare and threatened species		
Is water being used 'fit for purpose'?		
Has an onsite inspection been arranged on the finalisation of the project to ensure compliance with the Environmental Management Plan?		

Road construction and maintenance undertaken by Council staff		
If the roadside has a high conservation value has the construction or maintenance project been referred to Environment staff for environmental assessment?		
Are the staff involved in the works aware of environmental management operational techniques as recommended by the *Roadside Conservation Code of Practice for Field Services Staff and Contractors Handbook*?		
Has a site map been developed indicating special areas such as rare and threatened species and weed infestations?		
Is any native vegetation removal planned? Does the removal require a planning permit and offsets? – see Planning or Environment staff		
If the roadside has a high conservation value, have methods for excess spoil disposal and management of ground vegetation debris been developed and agreed on?		

Appendix 4 - Native Vegetation-Technical Information Sheet.

Native Vegetation – Technical information sheet

Defining an acceptable distance for tree retention during construction works

Native vegetation technical information sheet

This information sheet is provided to clarify and supplement the information contained in *Victoria's Native Vegetation Management: A Framework for Action* (DNRE 2002) and the *Guide Assessment of Referred Planning Permit Applications* (DSE 2007).

Defining an acceptable distance for tree retention during construction works

Construction projects that involve earthworks can cause indirect losses of native vegetation. Of particular concern is the longer-term impact of soil compaction and excavation (e.g. trenching for pipelines, cabling, etc) close to trees and the effects on tree health.

To prevent indirect losses of native vegetation it is recommended that Tree Retention Zones (TRZs) be implemented for the duration of construction activities.

A TRZ is a specific area above and below the ground, with a radius 12 x the Diameter at Breast Height (DBH) (see figure 1). The TRZ of trees should be no less than 2 m or greater than 15 m. The TRZ of tree ferns should not be less than 1 m outside the crown projection.

It is recommended that during construction activities, physical barriers be erected to delineate the TRZ.

During construction, the following activities should be excluded from the TRZ:

- machine excavation including trenching
- directional drilling that is less than 600 mm deep
- excavation for silt fencing
- storage
- preparation of chemicals, including preparation of cement products
- parking of vehicles and plant
- refuelling
- dumping of waste
- placement of fill
- temporary or permanent installation of utilities and signs
- physical damage to the tree.

By default, a tree will be considered lost and require an offset if one of the above activities occurs over more than 10% of the total area of the TRZ. However, if a qualified arborist confirms that the specific works will not significantly damage the tree will be considered retained and no offset will be required.

In some cases construction works may occur within areas that have been subject to previous soil disturbance through ongoing agricultural activities. Where work within the TRZ results in no additional soil disturbance than has occurred through previous ongoing agricultural activities, such as cropping or cultivation, the trees will not be considered lost and no offset will be required.

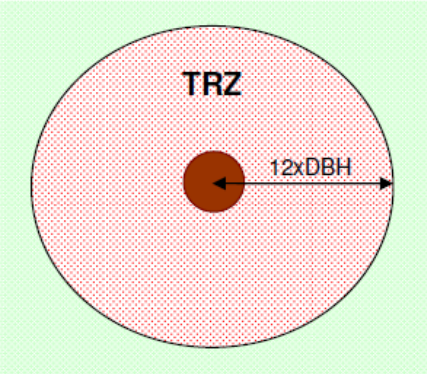
Please note, for a tree to be used as an offset for other tree clearing, it must meet the definition of Protection of a tree[1] on page 28 of the *Guide for Assessment of Referred Planning Permit Applications* (DSE 2007).

[1] The *Guide for Assessment of Referred Planning Permit Applications* (DSE 2007) (pg. 28) defines "protection of a tree" to be an area with twice the canopy diameter of the tree fenced and protected from adverse impacts: grazing, burning and soil disturbance not permitted, fallen timber retained, weeds controlled, and other intervention and/or management if necessary to ensure adequate natural regeneration or planting to occur.

www.dse.vic.gov.au/nativevegetation

State Government Victoria

Figure 1 Definitive lost/retained boundary set by Tree Retention Zone.



References

Department of Natural Resources and Environment (NRE 2002). *Victoria's Native Vegetation Management: A Framework for Action*. Department of Natural Resources and Environment, East Melbourne.

Department of Sustainability and Environment (2007). *Guide for Assessment of Referred Planning Permit Applications*. Victorian Government, Department of Sustainability and Environment, East Melbourne.

Further information

For further information on native vegetation, please contact the DSE Customer Service Centre on **136 186** or visit the DSE website at: www.dse.vic.gov.au/nativevegetation

Published by the Victorian Government Department of Sustainability and Environment, Melbourne, September 2011

Authorised by the Victorian Government, 8 Nicholson Street, East Melbourne

For more information contact the DSE Customer Service Centre 136 186

MANSFIELD SHIRE

MANSFIELD SHIRE COUNCIL

COMMUNITY ROADSIDE HANDBOOK

GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

This project received funding support from the Goulburn Broken Catchment Management Authority through the Commonwealth Natural Heritage Trust program

Australian Government

1.0 INTRODUCTION

Prior to European Settlement a diverse range of native vegetation types existed across Mansfield Shire including; Valley Grassy Forests, Plains Grassy Woodlands, Herb-Rich Foothill Forests, Riparian Woodlands and Riparian Forests.

This native vegetation, especially in the lower valley and plains areas, has been extensively cleared for agriculture and timber production. Most remnants in these areas now only remain on road reserves. These remnants provide some of the few remaining examples of natural ecosystems and contribute significantly to wildlife habitat and corridors between isolated areas of bushland.

A key strategic objective of Mansfield Shire Council's Council Plan 2006-2009 is a Sustainable Environment, being to "*embrace our responsibility as custodian of community resources by aiming to achieve maximum benefit to the community from all our resources while valuing and enhancing our natural environment*." A strategy of this objective is to "*develop and implement environment strategies to provide a framework for improved environmental practices Shire-wide that protect and enhance the natural and heritage values*."

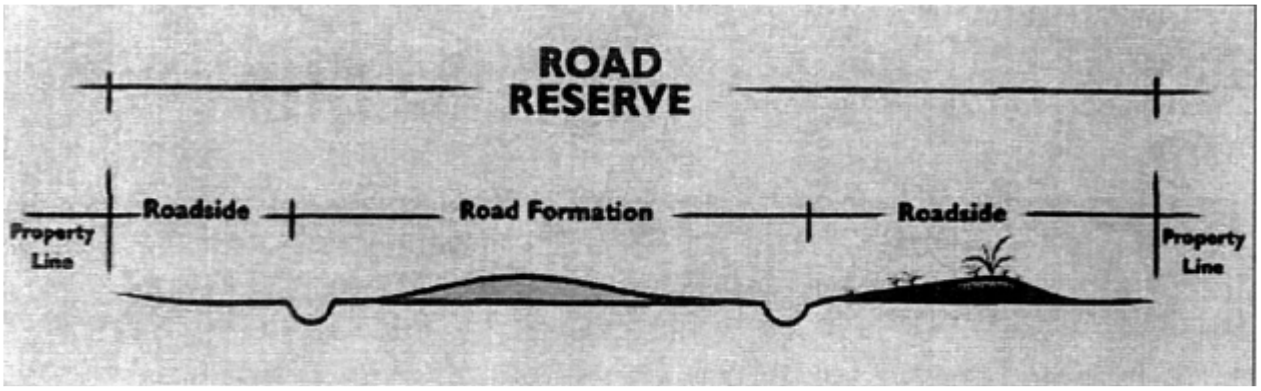
These environmental values have been carried on in the Mansfield Shire Council Plan 2013-2017 which refers to different themes, identifying a wide range of community aspirations, with the leading theme being "improving Our Built and Natural Environment". A stated goal of this plan is "*our businesses, residents, ratepayers and visitors act responsibly and proactively to protect and enhance the environmental features we value".*

The Victorian State Government's primary goal for the management of native vegetation is "*a reversal of the long-term decline in the extent and quality of native vegetation, leading to a Net Gain across the entire landscape*."

The Community Roadside Handbook is 1 of 3 documents that council's roadside conservation management actions are guided by. All the documents aim to incorporate principles of conservation into Council's strategy and community involvement in roadside management.

1.1 What Is a Roadside?

A road reserve is established to provide a safe and effective network for vehicle movement and access for utility services. The roadside is usually the area between a property boundary and the road drain as detailed in the diagram below.



Picture sourced from Patrick Connor and Murray Ralph, 2006, *Environmental Handbook for Roadsides*, Land Connect Australia

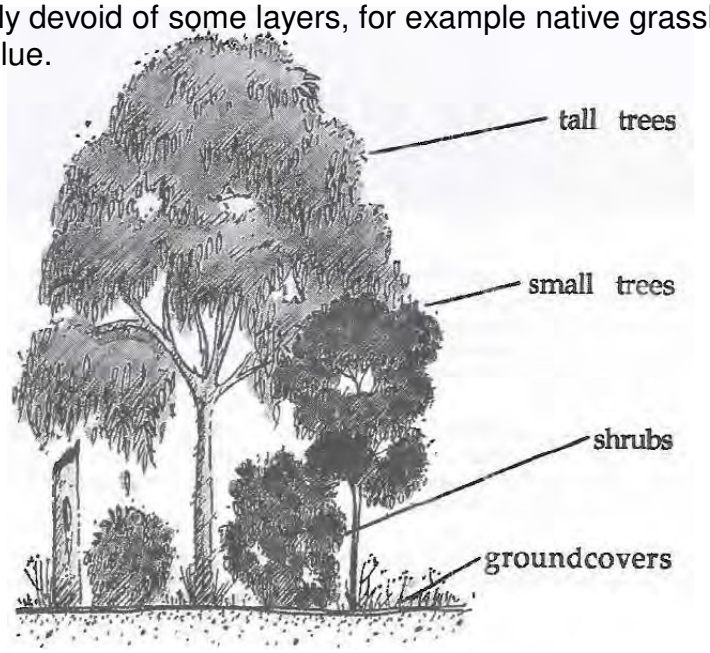
1.2 Why is Roadside Conservation Important?

- Undisturbed roadsides support a high diversity of native animals and plants.
- Native vegetation on roadsides can include many of the few remaining examples of intact habitat in highly developed landscapes.
- Roadsides often provide the only wildlife corridors to other vegetation remnants.
- In the Goulburn Broken Catchment there are native vegetation species known only to remain on roadsides and native wildlife that would otherwise not exist in some areas without roadside habitats.
- Native vegetation is easier to manage than introduced vegetation.
- Native grasses have lower fuel loads and therefore lower fire risk than introduced species.

2.0 GENERAL PRINCIPLES

Trees are good – bush is better!

Native Vegetation includes trees, shrubs, grasses and groundcovers. Some vegetation habitats are naturally devoid of some layers, for example native grasslands. All layers of bush have equal value.



Picture sourced from Patrick Connor and Murray Ralph, 2006, *Environmental Handbook for Roadsides*, Land Connect Australia

Principles of roadside conservation are:

- Ensure the safe function of roads for vehicle transit.
- Conserve existing native vegetation.
- Encourage re-establishment of native vegetation by conserving regeneration.
- Revegetate priority roadsides to create wildlife corridors and protect rare and threatened plants and animals.
- Acknowledge the importance that roadside vegetation plays in providing habitat for native wildlife.
- Use best practice vegetation management to ensure safety of road users
- Conserve and protect rare and threatened plants and animals.

3.0 CONSERVATION VALUE OF ROADSIDES

A vehicle-based assessment of all roads outside townships, for which Council is the responsible authority, has been undertaken to determine a conservation value of high medium or low as outlined in the table below.

Council has developed a Roadside Conservation Values Map Booklet. Please contact Council for more information.

High Conservation Value ▪ Low disturbance ▪ Canopy, mid and lower native vegetation layers present (including regeneration) ▪ Low weed presence ▪ Native vegetation occurs across majority of roadside ▪ Includes a range of habitats ▪ May form a wildlife corridor ▪ May provide habitat for rare or threatened species ▪ Generally requires little maintenance	 Rifle Butts Road, Mansfield
Medium Conservation Value ▪ Moderate disturbance ▪ Native vegetation occurs mainly in patches ▪ Some regeneration ▪ Few habitat features	 Mt Battery Road, Mansfield
Low Conservation Value ▪ Substantially disturbed or modified ▪ Predominately non-native vegetation ▪ Little to nil regeneration ▪ Few habitat features ▪ Potentially an increased fire risk	 Pollards Road, Boorolite

4.0 RISKS TO ROADSIDE BIODIVERSITY

The Reference Group of a joint local government and Goulburn Broken Catchment Management Authority project, *Goulburn Broken Catchment Roadside Biodiversity Risk Management Protocols*, of which Mansfield Shire Council is a member, have identified 7 activities that have the potential for the greatest impacts on biodiversity on roadsides. The table below outlines these activities and associated level of risk.

Table 1: Risk Score* Summary

	Program						
Potential Impact	Road construction & maintenance	Fire prevention works	Livestock movement & grazing	Slashing & spraying	Fence & property access	Roadside rehabilitation	Firewood collection
Native vegetation removed/effected	9	9	9	8	8	8	8
Loss or damage to habitats	9	9	9	8	8	8	8
Accidental pest spread, weeds etc	8	8	8	9	7	7	6
Contamination run-off sediments dust	7	7	7	6	5	5	5
Altered water regimes, drainage etc	6	5	4	4	4	4	4

***Score range is 2-10. Scores of 2-4 indicate lowest risk, 5-7 moderate risk and 8-10 high risk.**

Table sourced from *Goulburn Broken Catchment Roadside Biodiversity Risk Management Protocols Report, December 2007*.

5.0 GUIDELINES FOR ROADSIDE ACTIVITIES

5.1 Summary of Guidelines for Roadside Activities

Written consent is required from Council before undertaking works in a road reserve under the *Road Management Act* 2004. Mowing of nature strips in residential areas by adjoining landowners does not require consent.

Activity in Municipal Road Reserve	Approval Required	Contact
Fencing	-Works in a Municipal Road Reserve Permit -Planning Permit may be required if native vegetation removal is involved	Council – 5775 8555
Fire Management	-Must align with Municipal Fire Management Plan -Works in a Municipal Road Reserve Permit -Planning Permit may be required if native vegetation removal is involved	Council – 5775 8555
Collection of Firewood	-Firewood Collection Permit required -Works in a Municipal Road Reserve Permit	Council – 5775 8555
Droving, grazing or movement of livestock	-Local Laws Permit	Council – 5775 8555
Pest Animals	-Works in a Municipal Road Reserve Permit	Council – 5775 8555
Property Access	-Planning Permit may be required if native vegetation removal is involved -Works in a Municipal Road Reserve Permit	Council – 5775 8555
Recreation Vehicles	-Local Laws Permit	Council – 5775 8555
Revegetation (planting any trees, shrubs or grasses)	-Works in a Municipal Road Reserve Permit	Council – 5775 8555
Seed Collection	-Seed Collection Permit -Works in a Municipal Road Reserve Permit	DEPI Office Benalla - 57611611 Council – 5775 8555
Mowing/slashing	-Planning Permit may be required if native vegetation removal is involved	Council – 5775 8555
Signs	-Works in a Municipal Road Reserve Permit	Council – 5775 8555
Spraying	-Planning Permit may be required if native vegetation removal is involved	Council – 5775 8555
Remove, destroy or lop native vegetation	-Planning Permit may be required -Works in a Municipal Road Reserve Permit	Council – 5775 8555
Remove exotic trees or shrubs not listed as noxious weeds	-Works in a Municipal Road Reserve Permit	Council – 5775 8555

5.2 Fencing

Council requires third parties undertaking fencing works on a road reserve boundary to obtain a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004).

A Planning Permit may be required if native vegetation is being removed, destroyed or lopped as a result of the fencing works (Mansfield Planning Scheme).

Guidelines:

- The fence line should be re-aligned, relocated or vegetation incorporated into the fence design before native vegetation removal is considered (avoid removal).
- Consult Council's Planning Unit if native vegetation removal is deemed unavoidable.
- Works and machinery operation must be conducted from the property side of the road reserve boundary.
- The extent and location of works must be clearly defined and understood by those undertaking the work.
- Waste must not be left on the road reserve.
- Erosion and sediment control measures must be in place.
- Biodiversity assets and roadside conservation value must be identified and understood by those undertaking the work.
- A minimum extent of grass can be slashed along the fence line (minimum of 100mm high for native grasses) if impeding work. The area must not be graded or ploughed.

5.3 Fire Management

Council requires third parties undertaking fire management activities to obtain a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004). Only works in accordance with the Municipal Fire Management Plan, the Road Management (Works & Infrastructure) Regulations 2005 and approved by Council's Fire Prevention staff will be permitted on road reserves. A Planning Permit may be required if native vegetation is to be removed, destroyed or lopped.

Roadsides do not need to be cleared, 'cleaned up' or mowed to provide reasonable fire precautions.

Native grasses have lower fuel loads than introduced grasses.

Heavier fuels like branches and logs (greater than 25mm in diameter) are slower to ignite than fine fuels and give off heat more slowly, therefore can be retained in road reserves while maintaining an effective firebreak.

Dead and fallen timber is very important habitat for many native mammals, birds, reptiles and insects. Fire prevention activities on roadsides significantly contribute to the decline of some species due to the removal of timber debris.

Guidelines:

- No ploughed or graded firebreaks to be constructed by landowners on roadsides
- Landowners are encouraged to undertake fire prevention works on their own property.
- See section 5.13 on slashing

5.4 Firewood Collection

Council requires third parties undertaking firewood collection to obtain a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004) and a Firewood Collection Permit is required.

Firewood collection on roadside in State Forests is only allowed in a designated firewood collection area. Contact DEPI for further information.
VicRoads do not allow firewood collection on roadsides they manage.

Guidelines:

- Firewood collection is not permitted on high conservation value roadsides.
- Only fallen timber can be collected, standing vegetation, dead or alive, must not be cut down.

Dead and fallen timber is very important habitat for many native mammals, birds, reptiles and insects. Firewood collection on roadsides significantly contributes to the decline of some species.

5.5 Livestock Movement, Grazing and Droving

Council acknowledges that livestock make an important contribution to the Shire's economy. However, management of livestock activities on roadsides must achieve a balance between economic, safety and environmental factors. The Roadside Conservation Management Plan addresses environmental factors in particular, while Local Laws address safety issues.

A Local Laws Permit is required for livestock movement, grazing and droving on municipal roadsides (Mansfield Shire Council Community Local Law 2008).

Guidelines:

- Droving or grazing on High Conservation Value roadsides is not permitted.
- Droving or grazing on Medium Conservation Value roadsides can be permitted where ecological benefits such as weed control can be demonstrated, or to reduce fuel in accordance with the Municipal Fire Management Plan.
- Droving or grazing on Low Conservation Value roadsides can be permitted if feed is at sufficient levels to prevent soil compaction which can lead to erosion.
- Conditions will be placed on permit holders when given approval to graze/drove livestock.

5.6 Pest Animals

Council requires third parties undertaking pest animal control works on a road reserve boundary to obtain a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004).

A Planning Permit may be required if native vegetation will be removed or destroyed as a result of pest animal control works.

A pest animal is an introduced animal with an established self-supporting population in the wild (also known as *feral*) that is a threat to human health, primary production and/or the natural environment.

Responsibility for management of established pest animals on private land is that of the landowner. The management of Rabbits on roadsides (except roads managed by VicRoads) is to be undertaken in association with Council's endorsed Roadside Weed and Rabbit Control Plan.

Guidelines:

- Consult local Department of Primary Industries Pest Management Officer for most effective pest animal control techniques.
- Operate machinery from the private property side of the road reserve boundary wherever possible.
- Machinery hygiene must be undertaken to reduce spread of weeds.

5.7 Pest Plants (Weeds)

Council requires third parties undertaking pest plant (weed) control works on a road reserve boundary to obtain a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004).

A Planning Permit may be required if native vegetation will be removed or destroyed as a result of pest plant (weed) control works.

A weed is a plant that requires some form of action to reduce its harmful effects on the economy, the environment, human health and amenity. Weeds may be native plants that have spread in response to changed conditions, but are often plants that have been introduced from outside Australia.

Declared noxious weeds are plants that have been proclaimed under the *Catchment and Land Protection Act* 1994 to be a serious threat to agriculture and/or the environment. These weeds are classified as State Prohibited, Regionally Prohibited, Regionally Controlled or Regionally Restricted.

State Prohibited Weeds either do not yet occur in Victoria but pose a significant threat if they invade, or are present, and do pose a serious threat and that it is reasonable to expect that they can be eradicated from Victoria. Control of these weeds is the responsibility of the Department of Primary Industries wherever they occur throughout Victoria.

Regionally Prohibited Weeds are not widely distributed across Victoria, but are capable of spreading. It is reasonable to expect that they can be eradicated from a region. Private landholders are responsible for control on private land but not on roadsides adjoining their property, which are the responsibility of Local Government or VicRoads, depending on the class of road.

Regionally Controlled Weeds are widespread and established in a region. To prevent their spread, continuing control measures are required. Landholders have the responsibility to take all reasonable steps to control and prevent the spread of these weeds on their land but not on roadsides adjoining their property, which are the responsibility of Local Government or VicRoads, depending on the class of road.

Regionally Restricted Weeds are a serious threat to primary production, Crown Land, the environment or community health in another State or Territory of Australia, which have the potential to spread into and within Victoria, and pose an unacceptable risk of spreading in this State or to other parts of Australia if they were to be sold or traded in Victoria. Trade in these weeds and material containing them is prohibited.

Weed Category	Weeds Classified in the Goulburn Broken Catchment	
State Prohibited	Alligator Weed Black Knapwed Camel thorn Ivy leaf Sida Mesquite Parthenium Weed Salvinia Water Hyacinth Bear-skin fescue Branched broomrape Giant knotweed Giraffe thorn Hawkweed Japanese knotweed	Japanese knotweed hybrid Horsetail Karoo thorn Lagarosiphon Lobed needle grass Marijuana Mesquite Mexican feather grass Nodding thistle Perennial Ragweed Poverty weed Tangled Hypericum
Regionally Prohibited	Ragwort Serrated Tussock Wild Garlic African daisy African feather grass	Artichoke thistle Cape tulip (one-leaf) Cape tulip (two-leaf) Illyrian thistle Wild garlic
Regionally Controlled	African boxthorn African Love Grass Amsinckia Bathurst burr Blackberry Boneseed Buffalo burr Caltrop Cape broom Chilean cestrum Devil's claw (purple flower) Devil's claw (yellow flower) Dodder English Broom Gorse Golden thistle Gorse Great mullein Hardheads Hawthorn Hemlock Horehound Khaki weed	Noogoora burr Ox-eye daisy Paterson's Curse Perennial thistle Prairie Ground Cherry SaffronThistle Scotch thistle Silverleaf nightshade Spiny burr grass Spiny emex Spiny rush St Barnaby's thistle St.John'sWort Sweet Briar Thorn apple (common) Thorn apple (long-spine) Thorn apple (recurved) Tree of heaven Tufted honey flower Tutsan Variegated thistle Viper's bugloss

Source: Department of Environment and Primary Industries: http://www.depi.vic.gov.au/agriculture-and-food/pests-diseases-and-weeds/weeds/invasive-plant-classifications/weed-classification-victoria (Jan 2014)

Environmental weeds are plants that threaten natural ecosystems, including both introduced plants and native plants that originally come from other areas of Australia. They are capable of invading native plant communities and out-competing native species; resulting in a reduction of plant diversity and loss of habitat for native fauna.

Outbreak of Environmental Weed *Agapanthus*

Guidelines:

To avoid the spread of weeds:

- Minimise disturbance.
- Learn to identify weeds of the region.
- Vehicles and machinery spread weeds; before using machinery or vehicles on roadsides, all soil and vegetation is to be removed with a high-pressure water hose or by scraping and brushing.
- Do not dump garden waste, plough or grade roadside.
- Do not plant environmental weeds, especially near roadsides.

Weed control:

- Early intervention is most cost effective.
- On high or medium conservation value roadsides, consult local Department of Primary Industries Pest Management Officer for best weed control methods.
- Apply control treatments at optimum times.
- Revegetate treated areas with indigenous plant species to minimise recurrence; see section 5.10 Revegetation or contact Council for further information.
- Work with neighbouring landholders for a coordinated approach.
- Treat small outbreaks and isolated patches first, isolate major infestations and work from outside to centre of the infestation.

See section 5.13 Slashing and 5.14 Spraying for more information and guidelines.

5.8 Property Access

Council requires a Works on Municipal Road Reserve Permit for third parties undertaking property access works (*Road Management Act* 2004).

A Planning Permit is required for native vegetation removal (*Planning and Environment Act* 1987).

Guidelines:

- Choose a location that will cause the least impact on biodiversity.
- Operate machinery from the private property side of the road reserve boundary wherever possible.
- If machinery operation is necessary on the roadside, ensure that it has been cleaned with a high pressure water pump or brushed to reduce the possibility of weed spread.
- Implement erosion and sediment control measures.
- Undertake weed control following the installation of the access.
- Remove all rubbish and spare construction materials from the roadside.

5.9 Recreation Vehicles

A Local Laws Permit is required to operate recreation vehicles on roadsides (Mansfield Shire Council Community Local Law 2008).

A Planning Permit is required for native vegetation removal (*Planning and Environment Act* 1987).

Guidelines:

- Remain on existing tracks.
- Minimise site disturbance.

5.10 Revegetation/Rehabilitation

Priorities for managing native vegetation at a State and regional level are:

- Retain and protect existing remnants.
- Enhance existing remnants.
- Connect existing remnants by Biolinks (Wildlife Corridors).

Projects should reflect this approach by:

- Enhancing existing remnants through weed and pest animal control and adding habitat features such as logs.
- Supplementing existing remnants by planting shrubs and understorey indigenous species.
- Establishing wildlife corridors in appropriate locations.

Most activities associated with revegetation on roadsides would be considered as works under the Road Management Act 2004 and therefore Council requires a Works in Municipal Road Reserve Permit. Revegetation works must not compromise road safety.

Guidelines:

- Contact Council to assess suitability of planting.
- Submit plans for the revegetation project to Council at least two months prior to works commencing.
- Adjacent landholders must be consulted.
- Plantings should not be undertaken on Fuel Reduced Corridors or within the cleared areas of Priority Access Roads designated in the Municipal Fire Management Plan.
- Only use species relevant to the Ecological Vegetation Class of the area.
- Trees or shrubs should not be planted in native grasslands.
- Non-native species must not be planted under any circumstances.
- Vegetation should not obscure traffic sight lines and visibility. Do not plant trees with a mature trunk diameter of 100mm at base within sight lines. Council can advise on appropriate set backs for road safety aspects as specified in the VicRoads Design Guidelines.
- Follow up weed control must be undertaken.

5.11 Seed, Foliage and Wild Flower Collection

Council requires a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004).

A permit is also required from DEPI Benalla Office (*Flora and Fauna Guarantee Act*1988).

Guidelines:

- Ensure ecologically sustainable seed collection practices are used; see www.florabank.org.au
- Avoid disturbance to site.

5.12 Signs

Council requires a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004) and in some cases a Planning Permit (*Planning and Environment Act* 1987).

Guidelines:

- Avoid affixing signs directly to trees as this can cause the tree to decline in health.
- This includes real estate signs.

5.13 Slashing

Slashing on roadsides has a high risk of:

- removing or destroying native vegetation.
- loss of or damage to habitats.
- accidental spread of weeds.

Slashing of native vegetation may require a Planning Permit (*Planning and Environment Act* 1987).

Guidelines:

- Due to the potential serious risks to biodiversity, mowing/slashing on roadsides outside of townships should be avoided wherever possible, especially on roadsides of high conservation value.
- Identify native vegetation prior to mowing or slashing; consult Council if unsure.
- Slashing for fire prevention must comply with the Municipal Fire Management Plan and be undertaken just prior to the commencement of the Fire Hazard Period.
- Slasher blades must be set at a minimum height of 100mm when slashing native grass.
- Clean contaminated machinery after working in known areas of weed infestation to avoid weed spread.
- Dead vegetation created by spraying works can be left to undergo decomposition.

5.14 Spraying

Spraying on roadsides has a high risk of removing or destroying native vegetation, incurring loss of, or damage to, wildlife habitat and causing accidental spread of weeds.

Council requires a Works in a Municipal Road Reserve Permit (*Road Management Act* 2004).

Dead vegetation created by spraying works can be left to undergo decomposition, or if considered a fire hazard, mulch and spread back over the area rather than being 'cleaned up'.

Guidelines:

- Consult Council or the Department of Environment and Primary Industries (DEPI) if you are unsure if there is native vegetation present on a roadside you are going to treat and consult with DEPI's Pest Management Officer for most effective weed control methods.
- Herbicides should only be used to control weeds when other alternatives are not suitable.
- Persons undertaking herbicide application must have appropriate qualifications (Chemcert/ACUP).
- Damaging plants other than weeds can cause greater weed problems due to disturbance. This risk can be reduced by:
    - Identifying native vegetation with highly visible tape.
    - Spraying weeds from a close distance.
    - Using low pressure and large droplet size to minimize drift.
    - Spraying in calm and dry weather conditions.
- Broad scale spraying targeting all ground cover vegetation on roadsides should occur.
- In instances where weeds sit among native vegetation, make sure weed control techniques are specific, such as:
    - Drilling and filling, or cutting and painting.
    - Using target specific herbicides.
    - Using spray hoods where possible to eliminate spray drift.
    - Hand pulling (where weed occurrence is minimal).
- While conducting weed control works, consideration must be given to managing spread of weeds. This can be controlled by:
    - Washing/brushing down machinery before leaving weed infested areas.
    - Washing/brushing down machinery before entering areas which have low weed infestation.
    - Beginning work in areas of low infestation then moving to areas of high infestation.

5.15 Vegetation Removal

A Works in a Municipal Road Reserve Permit (*Road Management Act* 2004) is required for any vegetation removal (native or exotic) on municipal roadsides, this includes dead vegetation.
A Planning Permit is required under the Mansfield Planning Scheme in accordance with the Planning and Environment Act 1987 to remove, destroy or lop native vegetation, some exemptions apply. Contact Council Planning staff for guidance and advice.

Guidelines:

- Native vegetation applications will be assessed based on avoid, minimise and offset principles.
- Vegetation removal for maintenance of road envelope or risk management must be coordinated by Council.
- Coordination and costs associated with vegetation removal required for other approved roadside works or activities is the responsibility of the applicant.
- Third-parties must engage a qualified Arborist to undertake approved vegetation removal.
- Council may refer applications for native vegetation removal on roadsides to the Department of Environment and Primary Industries for approval.

Appendix 1 – Agency Contact Details

Department of Environment and Primary Industries

General Enquires	136 186
Alexandra	
Native Vegetation Officer – referral for native vegetation removal applications	03 5772 0200
Benalla	
Native vegetation seed and flower harvesting permits	03 5761 1611
Wild-dog management	0428 503 169
Mansfield	
Game hunting permit	03 5733 1200
Timber harvesting operation licences	
Tatura	
Weed control management	03 5833 5222
Toolangi	
Wildlife management	0429 978 286
Snobs Creek	
Pest animals (non native)	03 5774 2217

Goulburn Broken Catchment Management Authority

Shepparton (head office)	
Referral for works in waterways applications	03 5820 1100
Yea	
Local office for revegetation works along waterways	03 5736 0100

APPENDIX 2 – RARE & THREATENED FLORA AND FAUNA LIST FOR THE GOULBURN BROKEN CATCHMENT

FAUNA

Presumed extinct

Southern Bettong
White-footed Rabbit-rat

Regionally extinct

Southern Purple-spotted Gudgeon
Rufous Bettong
Rufous-bellied Pademelon

Critically Endangered

Barred Galaxias
Bluenose Cod (Trout Cod)
Plains-wanderer
Australian Painted Snipe
Australian Bustard
Regent Honeyeater
Spotted Bowerbird
Mountain Pygmy-possum
Small Ant Blue
Golden Sun Moth
Helmeted Honeyeater
Giant Bullfrog
Spotted Tree Frog
Alpine Tree Frog

Endangered

Broad-shelled Turtle
Gippsland Burrowing Crayfish
Dwarf Galaxias
Macquarie Perch
Freshwater Catfish
Malleefowl
Gull-billed Tern
Curlew Sandpiper
Bush Stone-curlew
Little Egret
Intermediate Egret
Little Bittern
Australasian Bittern
Freckled Duck
Blue-billed Duck
Grey Falcon
Barking Owl
Masked Owl
Superb Parrot
Swift Parrot

Endangered continued

Grey-crowned Babbler
Spot-tailed Quoll
Squirrel Glider
Leadbeater's Possum
Broad-toothed Rat
Smoky Mouse
Striped Legless Lizard
Lace Monitor
Alpine Bog Skink
Large Ant Blue
Carpet Python
Brown Toadlet
Rugose Toadlet
Growling Grass Frog

Vulnerable

Murray-Darling Rainbowfish
Australian Grayling
Flat-headed Galaxias
Murray Cod
Yarra Pygmy Perch
Silver Perch
Southern Pygmy Perch (Murray-Darling lineage)
Planarian
Red-chested Button-quail
Lewin's Rail
Baillon's Crake
Fairy Prion
Black-browed Albatross
Indian Yellow-nosed Albatross
Shy Albatross
Pacific Golden Plover
Inland Dotterel
Eastern Curlew
Wood Sandpiper
Common Sandpiper
Common Greenshank
Marsh Sandpiper
Brolga
Eastern Great Egret
Australasian Shoveler
Hardhead
Musk Duck

Vulnerable continued

Grey Goshawk
White-bellied Sea-Eagle
Square-tailed Kite
Black Falcon
Powerful Owl
Sooty Owl
Major Mitchell's Cockatoo
Regent Parrot
Scarlet-chested Parrot
White-throated Needletail
Ground Cuckoo-shrike
Chestnut-rumped Heathwren
Speckled Warbler
Painted Honeyeater
Purple-gaped Honeyeater
Brush-tailed Phascogale
Common Dunnart
Greater Glider
Grey-headed Flying-fox
Eastern Horseshoe Bat
Bearded Dragon
Glossy Grass Skink
Bandy Bandy
Tussock Skink
Black-tailed Godwit
Southern Toadlet

Near threatened

Murray Spiny Crayfish
Golden Perch
Emu
Little Button-quail
Diamond Dove
Common Diving-Petrel
Pied Cormorant
Whiskered Tern
Caspian Tern
White-fronted Tern
Latham's Snipe
Australian Pratincole
Glossy Ibis
Royal Spoonbill
Nankeen Night Heron
Magpie Goose
Spotted Harrier

Near threatened continued

Turquoise Parrot
Azure Kingfisher
Red-backed Kingfisher
Black-eared Cuckoo
Hooded Robin
Crested Bellbird
Spotted Quail-thrush
Diamond Firetail
Long-toed Stint
Pectoral Sandpiper
White-footed Dunnart
Fat-tailed Dunnart
Eastern Pygmy-possum
Southern Myotis
Woodland Blind Snake
Pacific Gull
Brown Treecreeper (south-eastern ssp.)

Source: Victorian Biodiversity Atlas, Species Summary List, Department of Environment and Primary Industries, Jan 2014.

FLORA

Presumed extinct

Buffalo Leek-orchid

Mount Hope Guinea-flower

Endangered

Yarran Wattle
Weeping Myall
Mueller Daisy
Bald-tip Beard-orchid
Yellow Hyacinth-orchid
Buxton Gum
White-budded Red-gum
Rough Eyebright
Winged Peppercress
Lanky Buttons
Round-leaf Pomaderris
Small Scurf-pea
Tough Scurf-pea
Long-tail Greenhood
Southern Sandalwood
Stiff Groundsel
Large-headed Fireweed
Violet Swainson-pea
Slender Darling-pea
Red Swainson-pea
Mountain Swainson-pea
Downy Swainson-pea
Plump Swamp Wallaby-grass
Pale Plover-daisy
Small-leaf Bluebush
Turnip Copperburr
Crimson Spider-orchid
Purple Eyebright
Slender Water-milfoil
Swamp Leek-orchid
Spiny-fruit Saltbush
Jericho Wire-grass
Grey Billy-buttons
Lima Stringybark
Purple Wire-grass
Spiny Rice-flower
Matted Flax-lily
Slender Love-grass
Selma Saddle Grevillea
Lace Leek-orchid
Petite Leek-orchid

Vulnerable

Ausfeld's Wattle
Western Silver Wattle
Nealie
Mallee Golden Wattle
Jerry-jerry
Buloke Mistletoe
Native Wintercress
Austral Moonwort
Dookie Daisy
Water Shield
Western Water-starwort
Plump Windmill Grass
Small Milkwort
Downs Nutgrass
Lax Flat-sedge
Straw Wallaby-grass
Silky Umbrella-grass
Umbrella Grass
Golden Cowslips
Swamp Diuris
Purple Diuris
Trailing Hop-bush
Cane Grass
Long Eryngium
Spotted Gum
Common Fringe-sedge
Clover Glycine
Narrow Goodenia
Cottony Cassinia
Slender Club-sedge
Silver Tea-tree
Button Rush
Salt Paperbark
Ridged Water-milfoil
Wavy Marshwort
Velvet Daisy-bush
Australian Broomrape
Tree Geebung
Dainty Phebalium
Grey Rice-flower
Sharp Mountain Tussock-grass
Green Leek-orchid
Sparkling Mint-bush
Leafy Greenhood

Vulnerable continued

Scented Bush-pea
Swamp Buttercup
Alpine Pennywort
Twiggy Sida
Western Rat-tail Grass
Crimson Sun-orchid
Austral Toad-flax
Yellow-tongue Daisy
Wine-lipped Spider-orchid
Swamp Star
Beechworth Silver Stringybark
Striped Water-milfoil
Stony Bush-pea
Large Rustyhood
Riverina Daisy
Pale Swamp Everlasting
Pepper Grass
Silky Swainson-pea
Eastern Bitter-cress
Euroa Guinea-flower
Late-flower Flax-lily
Austral Crane's-bill
Delicate Crane's-bill
Fireweed Groundsel (Euroa variant)
Arching Flax-lily
Pale Hickory-wattle
Timbertop Wattle
Midlands Spider-orchid
Pale Flax-lily

Rare

Rough Daisy-bush
Sharp Greenhood
Silky Golden-tip
Alpine Wattle
Deane's Wattle
Bent-leaf Wattle
Dwarf Silver Wattle
Hickory Wattle
Spur-wing Wattle
Whirrakee Wattle
Snow Aciphyll
Alpine Blown-grass
Mueller's Bent
Rough Blown-grass
Common Spleenwort

Rare continued

Narrow-leaf Star-hair
Mealy Saltbush
Mountain Banksia
River Leafless Bossiaea
Baw Baw Daisy
Tiny Daisy
Winged Water-starwort
Blue Burr-daisy
Yellow Burr-daisy
Alpine Marsh-marigold
Forest Sedge
Alpine Sedge
Carpet Sedge
Broad-leaf Flower-rush
Bronze Bird-orchid
Common Sour-bush
Alpine Colobanth
Turquoise Coprosma
Snow Coprosma
Bear's-ear
Brittle Bladder-fern
Crag Wallaby-grass
Small-flower Wallaby-grass
Thick Bent-grass
Brown Beetle-grass
Snow Pennywort
Australian Anchor Plant
Broad-lip Diuris
Hairy Hop-bush
Alpine Sundew
Mountain Coral Heath
Snow Heath
Bald-seeded Willow-herb
Mountain Willow-herb
Coccid Emu-bush
Spotted Emu-bush
Common Pipewort
Silver Stringybark
Kamarooka Mallee
Mallee Ash
Omeo Gum
Spinning Gum
Blue Mallee
Yarra Gum
Hairy Eyebright

Rare continued

Veiled Fringe-sedge
Small-flower Mud-mat
Mat Cudweed
Cliff Cudweed
Spiked Goodenia
Western Golden-tip
Creeping Grevillea
Mountain Needlewood
Ovens Everlasting
Sky Lily
Stalked Guinea-flower
Fir Clubmoss
Slender Violet-bush
Hydrilla
Fog Club-sedge
Tufted Club-sedge
Sickle-leaf Rush
Sand Rush
Broom Scale-rush
Chinese Lespedeza
Sharp-leaf Woodrush
Tussock Woodrush
Spreading Clubmoss
Giant Honey-myrtle
Small Monkey-flower
Smooth Minuria
Spiny Lignum
Waterbush
Stalked Adder's-tongue
Tuft-rush
Alpine Tuft-rush
Snowdrop Wood-sorrel
Mountain Phebalium
Rock Tussock-grass
Long Podolepis
Broad Shield-fern
Golden Pomaderris
Dense Mint-bush
Sikh's Whiskers
Scaly Greenhood
Alpine Bush-pea
Small-leaf Bush-pea
Flat-leaf Bush-pea
Cupped Bush-pea

Rare continued

Strawberry Buttercup
Eichler's Buttercup
Gunn's Alpine Buttercup
Dwarf Buttercup
Serpent Heath
Dwarf Bitter-cress
Mossy Knawel
Branching Groundsel
Alpine Groundsel
Cane Spear-grass
Alpine Spear-grass
Smooth Rice-grass
Long Pink-bells
Crested Sun-orchid
Fringed Sun-orchid
Alpine Trachymene
Small Burr-grass
Rye Beetle-grass
Lilac Berry
Grassland Velleia
Milfoil Speedwell
Alpine Westringia
Baw Baw Berry
Glandular Early Nancy
Dark Wire-grass
Tadgell's Daisy
Naked Beard-orchid
Dwarf Brooklime
Gippsland Hemp Bush
Golden Sour-bush
Broom Bitter-pea
Bristly Greenhood
Mallee Annual-bluebell
Rosemary Grevillea
Short-bristle Wallaby-grass
Deane's Wattle
Common Spleenwort
Subalpine Baeckea
Velvet Apple-berry
Slender Pink-fingers
Mugga
Avon Tussock-grass
Parsley Xanthosia
Alpine Sunray

Rare continued	Poorly Known
Victorian Snow-daisy	Large River Buttercup
Carpet Snow-daisy	Eastern Speedwell
Green Billy-buttons	Common Joyweed
Small-flower Mat-rush	Swamp Water-starwort
Baw Baw Pepper	Slender Bitter-cress
Dusty Daisy-bush	Green-top Sedge
Dwarf Sickle-fern	Yelka
Alpine Phebalium	Cotton Panic-grass
Forest Phebalium	Pale Spike-sedge
Squat Picris	Granite Love-grass
Alpine Bootlace Bush	Summer Fringe-sedge
Fringed Rice-flower	Short-awned Wheat-grass
Highland Bush-pea	Hypsela
Silver Stringybark	Bundled Peppercress
Southern Swainson-pea	Native Peppercress
Alpine Trachymene	Austral Trefoil
Slender Water-ribbons	Leafless Bluebush
Riverina Bitter-cress	Smooth Nardoo
Forest Bitter-cress	Netted Daisy-bush
Fuzzy New Holland Daisy	Woolly Knotweed
Rising Star Guinea-flower	Galvanized Burr
Woolly Wattle	Narrawa Burr
Snowfield Groundsel	Rough Twig-sedge
Large-leaf Cinnamon-wattle	Bluish Raspwort
Green Scentbark	Single Bladderwort
Goldfield Boronia	Water Blinks
Mountain Cassinia	Curved Rice-flower
Soft Crane's-bill	Native Couch
Pale-flower Crane's-bill	Perennial Blown-grass
Toothed Leionema	Pale Grass-lily
Royal Grevillea	Frosted Goosefoot
Lake Mountain Grevillea	Slender Tick-trefoil
Alpine Buttons	Curved Rice-flower
Cotton Sneezeweed	Plain Quillwort
Moroka Candlebark	Yellow Star
Tall Apple-moss	Tall Club-sedge
Crisped Mitre-moss	Grey Spike-sedge
Brown's Mitre-moss	Blue-leaf Tussock-grass
Cliff Waxwort	Ferny Small-flower Buttercup
Wavy Fork-moss	Annual Buttercup
Floodplain Fireweed	Black Roly-poly
Rough Cassinia	Dark Roly-poly
Dwarf Cassinia	Sticky New Holland Daisy
	Plains Joyweed

Poorly Known continued	Species listed under the Flora and Fauna Guarantee Act 1988 (FFG Act)
Common Cinnamon-wattle Greenish-flower Vanilla-lily Slender Bindweed Swan-neck Moss Wimmera Bundy Snowy Colobanth Desert Bedstraw	Fauna Ancient Greenling Common Bent-wing Bat Apostlebird Flora Buloke Hairy Tails

Source: Victorian Biodiversity Atlas, Species Summary List, Department of Environment and Primary Industries, Jan 2014.

Appendix 3 – Revegetation Checklist and References List

Checklist	✓
Plans for the revegetation project have been submitted to Council at least two months prior to works and permission has been granted	
Adjacent landholders have been consulted and approve	
Indigenous plants are being sourced for use in the project	
The project includes weed control for two years after planting	
Trees are good, bush is better – are trees, shrubs, groundcovers/ grasses being planted?	
Is the project consistent with planting densities outlined in the Revegetation Guide for the Goulburn Broken Catchment?	
Plantings under powerlines will need approval from the responsible authority (SP Ausnet)	
Plantings must not obscure traffic sigh lines and visibility. Trees with a mature trunk diameter of 100mm at base are not to be planted within sight lines. Council can advise on appropriate setbacks for road safety aspects.	
Plantings are not to be undertaken on high conservation value roadsides, except for enrichment plantings of significant specific species, undertaken by people with suitable experience and qualifications	

Revegetation References List

Local Plants, A guide for the Mansfield Shire, Upper Goulburn Landcare Network, 2006.

Revegetation Guide for the Goulburn Broken Catchment, Department of Natural Resources and Environment, 2001.

Weeds of the Goulburn Broken, A field guide to terrestrial and aquatic weeds, 3rd edition, Goulburn Broken Catchment Management Authority and Department of Primary Industries, 2008.

Websites:

- www.gbcma.vic.gov.au
- www.seedbank.org
- www.depi.vic.gov.au
- www.mansfield.vic.gov.au