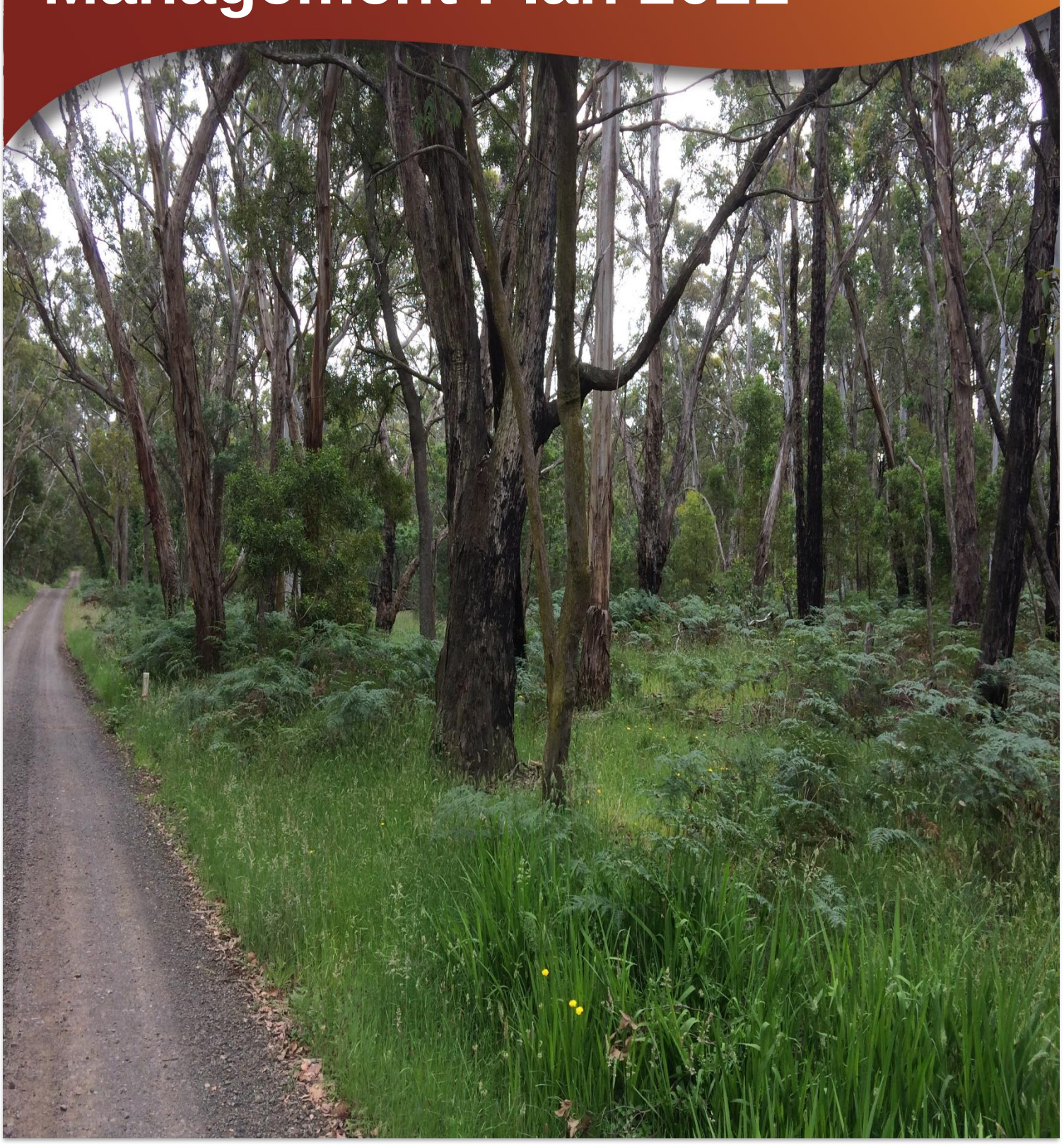
Adopted by Council - 24 November 2021

Macedon Ranges Shire Council

Roadside Conservation Management Plan 2021



Contents

Executive Summary

Within the Macedon Ranges Shire, road reserves account for some 7,000 ha of land. This equates to approximately 4% of the Shire. Within the road reserve, roadsides are the areas which are not used for motorised vehicle traffic. Assuming that, on average, more than half of the road reserve contains the road envelope itself, there remains over 3,000 ha of roadsides to manage. This is a considerable area - it is more than the Cobaw State Forest (2,220 ha) or Macedon Regional Park (2,379 ha).

Roadsides contain native vegetation that contribute significantly to Victoria's biodiversity. In many cases, native vegetation within the road network constitutes the only native vegetation remaining in the landscape, providing connection between fragmented and otherwise isolated patches. In some cases, native vegetation within roadsides is critical habitat for the survival of threatened flora and fauna.

The local community in the Macedon Ranges is proud of its roadside vegetation and maintains a strong interest in preserving a healthy environment across the Shire. Roadside vegetation provides ecosystem services and benefits such as carbon sequestration, oxygen, cooling, shade, habitat and biodiversity. It also contributes to the visual amenity of the shire, reduces noise, creates shelter belts and reduces rainfall runoff and soil erosion.

All roadside vegetation faces ongoing threats from a range of processes, including weed invasion, grazing pressure, vegetation clearance and roadworks. Due to the linear shape and proximity to roads, it is particularly vulnerable to edge effects and the processes of fragmentation.

Macedon Ranges Shire Council manages approximately 1,700km of roadsides for multiple outcomes – for protection and enhancement of biodiversity and habitat, to manage fire risks, and to ensure vehicle access and public safety. This is inevitably complex, requiring a balanced approach to decision making. However, with careful consideration and planning, practices like woody weed control can help meet goals for both fuel reduction and biodiversity protection.

With good management, the integrity and quality of the shire's high value roadsides can be enhanced. The Roadside Conservation Management Plan aims to protect the important ecological values within the road roadsides whilst ensuring appropriate fire risk mitigation and maintenance of road safety.

Key Implementation Actions

<u>Short term</u>

Assessments and mapping of threatened species and vegetation communities

Internal staff training program and a new 'ute guide' for roadside management

Update roadside conservation signage and introduce new 'marker poles'

Promotion of a simplified 'Environmental Works on Roadsides Permit' System

Update Council's Roadside Brochure

Development of an ecological and cultural burn program

Expanded weed control and vegetation management program

<u>Medium-Long term</u>

Specific roadside actions plans

Signpost wildlife crossing 'hot spots'

Review Vehicle Hygiene Manual

Standard Operating Procedure for drainage maintenance on high and medium conservation value roadsides

Clear communications materials about roadside management for residents

Roadside restoration program that introduces habitat trees in areas requiring greater habitat connectivity

Restoration program of larger disused areas (eg. spoil sites)

Part 1 - Background Information

1. Acknowledgement of Country

Macedon Ranges Shire Council acknowledges the Traditional Owners of this land, the Wurundjeri Woi Wurrung, Dja Dja Wurrung and Taungurung, as the caretakers and custodians of the lands now situated within the Macedon Ranges Shire. We recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past, present and emerging.

2. Purpose

The purpose of the Roadside Conservation Management Plan is to establish a set of standards and guidelines that ensure works within Council's roadsides protect any existing biodiversity values while meeting Council's fire management and road safety obligations.

The Plan also seeks to establish a communications and engagement program aimed at raising awareness amongst the community about the role of roadsides and their conservation values, permitted activities and relevant regulations.

3. Scope

This Plan applies to:

- All Council managed rural roadsides which are outside township boundaries.
- All Council managed roadsides with remnant native vegetation within township boundaries.

The Plan does not apply to:

- Roadsides in townships with no remnant native vegetation (nature strips)
- VicRoads managed roadsides
- Works in the roadway or road shoulder

4. Definition of a roadside

All road reserves contain two sections, as shown in figure 1:

1. The **road formation** – the road itself, the road shoulder and the table drain; and
2. The **roadside** – the land from the edge of the road formation to the boundary of the adjoining property. This includes all vehicle and pedestrian crossing from the road to an adjoining property.

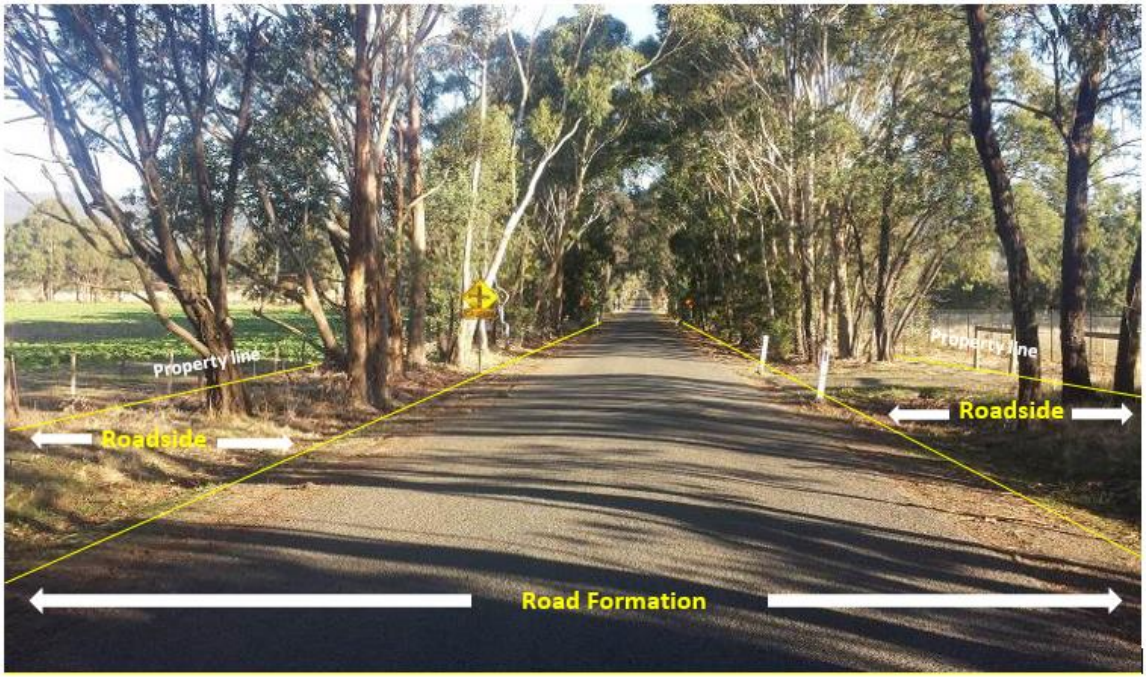


Figure 1: Defining the roadside

The *Road Management Act 2004* defines a roadside as:

"any land that is within the boundaries of a road (other than the shoulders of the road) which is not a roadway or a pathway and includes the land on which any vehicle crossing or pathway which connects from a roadway or pathway on a road to other land has been constructed

Example: Any nature strip, forest, bushland, grassland or landscaped area within the road reserve would be roadside"

5. Roadside Functions

Roadsides serve many important functions including:

Environmental
- Supporting native vegetation which is often the only remnant native vegetation in the landscape and, therefore, can contain rare and threatened species
- Providing habitat corridors for wildlife

Road safety
- Maintaining clear sight lines for vehicles
- Providing drainage to ensure the surface of the road formation is safe
- Providing for roadside furniture such as signs, guide posts and guard rails

Fire prevention
- Minimising the risk of fires starting
- Supporting the maintenance of strategic fire breaks that assist with managing fires (under review)

Aesthetic and cultural
- Contributing to the shire's aesthetic qualities and rural feel
- Containing features of cultural heritage significance

Recreation
- Providing space for recreation such as walking, cycling and horse riding

Infrastructure
- Providing space for services and utilities such as powerlines, telecommunications, gas and water

6. Road Categories

Council managed local roads are split into six road categories. These categories are used to determine inspection frequency, maintenance regimes and standards for new construction.

Council is not responsible for the following roads within the shire
- Roads within state forests or national parks unless specifically agreed to by MRSC (these are managed by DELWP or Parks Victoria)
- Arterial Roads and Freeways (these are managed by Regional Roads Victoria)

Table 1 outlines the different local road categories as described in the *Macedon Ranges Road Management Plan 2017*.

Table 1: Local Road Categories

Category	Type	Description	Daily use
1	Sealed link	Sealed roads carrying high traffic volumes	>2000
2	Sealer collector	Sealed roads carrying low traffic volumes generally of a local nature. Provides access to properties on that particular road and adjoining roads.	1000-2000
3	Sealed Access	Sealed roads providing access to properties on that particular road	500-1000
4	Unsealed collector	Unsealed roads carrying low traffic volumes generally of a local nature. Provides access to properties on that particular road and adjoining roads.	200-500
5	Unsealed access	Unsealed roads providing access to properties on that particular road. Generally dead-end roads	50-200
6	Unsealed local	Roads deemed to be of reasonable public benefit that do not meet Category 5 standards	<50
FAT	Fire Access Track	Unformed roads used only for fire-fighting purposes	N/A

7. Roadside Management in Macedon Ranges Shire

7.1. Previous Roadside Management Plans

Macedon Ranges Shire Council formed in 1995 after the amalgamation of the Shire of Romsey, Shire of Gisborne, Shire of Newham and Woodend and the majority of the Shire of Kyneton. Prior to the amalgamation, two roadside management plans had been prepared to address roadside management issues across these former municipal areas, being the *Gisborne Roadside Management Plan, revised 1993* and the *Draft Roadside Management Plan for the Shires of Newham and Woodend, Kyneton and Romsey, 1994*.

These documents have been reviewed and, where appropriate, aspects have been incorporated into this Roadside Conservation Management Plan.

7.2. Previous roadside assessments

1993 - 1994

The conservation values of roadsides within Macedon Ranges Shire Council were assessed and documented as a part of the preparation of the *Gisborne Roadside Management Plan, revised 1993* and the *Draft Roadside Management Plan for the Shires of Newham and Woodend, Kyneton and Romsey, 1994*. These plans used different criteria to classify roadsides as of “high”, “medium” or “low” conservation value.

2006 - 2008

An assessment of roadsides in the shire was next undertaken between December 2006 and July 2008 as a part of the North Central Catchment Management Authority (NCCMA) Roadside Conservation Project. This project, commissioned in 2004, was one of the outcomes resulting from the 2003 annual NCCMA Native Vegetation/Biodiversity Forum, where it was identified that a consistent and coordinated approach to roadside conservation across the region was urgently required.

The roadside assessment methodology used to calculate the conservation value of the roadside vegetation was developed specifically for the purposes of completing the roadside assessments and is loosely based upon an earlier methodology formulated by the Victorian Roadsides Conservation Committee. The assessment is comprehensive and covers a broad range of attributes present on

roadsides, both values and threats, and utilises this information to attribute a final conservation score to the portion of the roadside being assessed.

2017 - 2018

A reassessment of the medium and high value roadside vegetation values was undertaken to inform the development of the Roadside Management Plan. Due to the robust nature of these earlier assessments, the methodology was repeated for the second round of assessments carried out specifically to inform this report. It was envisioned that by repeating the methodology it may be possible to identify trends or patterns that are occurring across the roadsides.

A summary of the roadside assessment methodology is provided in Section 10, with a comprehensive description of the method detailed in **Appendix 2**.

7.3 Current Roadside Management

Macedon Ranges Shire Council currently undertakes the following management on Council managed roadsides. Refer to **Appendix 6** for an outline of roadside management responsibilities in Council.

Road safety
Council undertakes road safety works in accordance with the service standards set out in the *Road Management Plan 2017*. This includes:

- Annual assessments for encroachment of vegetation into the road maintenance envelope on Category 1 and 2 roads.
- Clearance / lopping of vegetation within the road maintenance envelope to enable the safe passage of vehicles. Proactive vegetation management occurs on an annual basis to implement the outcomes of the annual assessments. Reactive vegetation management also occurs when encroachment is identified by Council staff or the community.
- Clearance / lopping of vegetation to maintain clear sight lines
- Maintenance of table drains and mitre drains to remove water off the road formation
- Annual assessments and clearance of culverts.
- Installation and maintenance of guard rails, signs and guide posts

Fire prevention
Council's fire prevention works are guided by the *Municipal Fire Management Plan 2020-2023*. These works include:

- Fuel reduction, including slashing and brush cutting, along Roadside Fire Breaks.
- Fuel reduction burns in select locations.
- Treatment of weeds on strategic roadsides.

Environmental management
Council's environmental management works on roadsides include:

- Treatment of noxious weeds in accordance with the principles set out in Council's *Weed and Pest Animal Strategy 2014*.
- Facilitation of treatment of environmental weeds in partnership with Landcare under Council's Community Weed Partnership Program.
- Regulation of tree and vegetation clearance in accordance with the requirements of the *Macedon Ranges Planning Scheme.*
- Biodiversity monitoring as set out in the *Biodiversity Strategy 2018*, includes annual bird surveys, nest box monitoring and spotlight surveys along select roadsides.

8. Legislation

A number of pieces of state and federal legislation are applicable to roadside management activities. A brief summary of the main Acts likely to guide roadside management activities are included below, including the implications of these Acts for roadside management.

Commonwealth Legislation

8.1. *Environmental Protection Biodiversity and Conservation Act (1999)*

The *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the primary piece of Commonwealth legislation relating to environmental conservation. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places—defined in the EPBC Act as matters of national environmental significance.

Implications for the Roadside Vegetation Management Plan
A number of EPBC Act protected ecological species and communities have the potential to occur on roadsides within the Macedon Ranges Shire. The following list of flora species and ecological communities are known to occur, or have the potential to occur, on roadsides throughout the shire.

Fauna species
- Golden Sun Moth, *Synemon plana*
- Swift Parrot, *Lathamus discolour*

Flora species
- Black Gum, *Eucalyptus aggregate*
- Basalt Peppercress, *Lepidium hyssopifolium*
- Matted Flax-lily, *Dianella Amoena*
- Clover Glycine, *Glycine latrobeana*

Vegetation communities
- Grassy Eucalypt Woodland of the Victorian Volcanic Plain
- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
- Natural Temperate Grassland of the Victorian Volcanic Plain
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains
- White Box Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

Works carried out on roadsides with the potential to impact any matters of national significance will require a referral to the relevant federal agency, and ultimately the responsible Minister.

State Legislation

8.2. *Road Management Act 2004*

The *Road Management Act 2004* delivers a coordinated management system for public roads throughout Victoria. The Act contains clear definitions, specifies responsible authorities for management of various parts of the road network, and provides for efficiency and safety. The *Road Management Act 2004* requires Local Government Authorities to (amongst other things):
- Prepare a Road Management Plan
- Establish a Register of Public Roads for which it is responsible
- Establish policies and processes to manage roads

The Act is closely tied to several Gazetted Codes of Practice, developed to provide practical guidance for road authorities and works and infrastructure managers in the performance of their functions and duties. Codes of Practice of particular relevance to roadside management include:

- *Operational Responsibility for Public Roads*
- *Road Management Plans*
- *Management of Infrastructure in Road Reserves*
- *Worksite Safety – Traffic Management.*

Implications for the Roadside Conservation Management Plan

The *Road Management Act 2004* sets out the requirements for Road Management Plans which establishes management and maintenance standards for different road classifications. The Roadside Conservation Management Plan needs to take into account the legislative requirement to achieve these standards when considering processes and procedures for roadside works and balancing conservation and road safety outcomes.

Exemption 17 of the Act states that a person is exempt from the requirement to obtain written consent for the mowing of any part of a roadside.

8.3. *Flora and Fauna Guarantee Act 1988*

The *Flora and Fauna Guarantee Act 1988* (FFG Act) provides the key legal framework relating to the conservation of threatened species, threatened communities and management of potentially threatening processes on public land throughout Victoria. Over 700 species and communities and 42 threats are listed under the Act.

The role of the Act is to conserve all Victorian flora and fauna and sets out to achieve this via a range of mechanisms, including:

- listing threatened species, communities and threats to native species
- requiring an overarching strategy for Victoria's biodiversity
- enabling the declaration of habitat critical to the survival of native plants and animals
- placing a duty on public authorities to have regard to the objectives of the Act
- requiring permits for activities that could harm threatened plants and fish and communities.

Under the Act, a licence or permit is required to "*take, trade in, keep, move or process protected flora"* (Section 47(1)). This provision only applies to public land and private land declared to be "critical habitat". No areas have been declared "critical habitat" in the Shire of Macedon Ranges.

The FFG Act was amended in 2019 emphasising actions that prevent a species from becoming threatened, adopts a national approach to the assessment and listing of a threatened species, improves enforcement powers and increases penalties for all offences.

Implications for the Roadside Conservation Management Plan

A permit from the Victorian Department of Environment, Land, Water and Planning may be required for removal of FFG Act listed flora species from a roadside in the shire as a part of any management or maintenance works. This requirement is independent and in addition to any permit that may be required under Macedon Ranges Planning Scheme.

A permit or license may be required to collect seed or conduct research on listed threatened species that occur on road reserves.

The Roadside Conservation Management Plan needs to take into account these permit requirements when determining processes and procedures for roadside works that may impact FFG Act listed species.

8.4. Victorian Advisory Lists of Rare and Threatened Species

Additional to the statutory lists of threatened taxa, communities and threatening processes contained within the FFG Act, the Victorian State Government also maintains the Victorian Advisory Lists of Rare and Threatened Species. Although there are no direct legal requirements associated with the inclusion of a species on this advisory list, taxa assessed as rare, vulnerable or endangered in this list are considered through native vegetation planning permit approval and offset processes under Victoria's Native Vegetation Regulations. As a part of the FFG Act review, the Advisory Lists and FFG Act list will be consolidated in the near future.

8.5. *Country Fire Authority Act 1958*

Section 43 of the *Country Fire Authority Act 1958* requires public authorities, including municipal councils and VicRoads, to take all practicable steps to prevent the occurrence of fires, and to minimise the danger from the spread of fires on or from land which the authority owns, manages or maintains.

Additionally, Section 55 of the Act states that:

- Each municipal council must prepare and maintain a Municipal Fire Prevention Plan in accordance with the advice and recommendation of the Municipal Fire Prevention Committee.
- The plan must
  - Identify areas which are at particular risk;
  - Specify how these are to be treated; and,
  - Specify who is responsible for treating those risks.

As required under the Act, the Macedon Ranges Municipal Fire Management Plan (2020) has been produced.

Implications for the Roadside Conservation Management Plan

The *Country Fire Authority Act 1958* sets out the requirements for Council's Municipal Fire Management Plan which, amongst other things, establishes a prioritised program for fuel management on Council managed roadsides. The Roadside Conservation Management Plan needs to take into account these legislative requirements when considering how to balance fire risk management and biodiversity conservation.

8.6. *Planning and Environment Act 1987*

The *Planning and Environment Act 1987* sets out the objectives for land use planning in Victoria and the legislative framework for achieving these objectives. The Act requires municipalities to prepare and administer local planning schemes that can include targeted policies and provisions related to native vegetation removal and protection of the natural environment. The Act also sets out processes for enforcing planning schemes and planning permits.

Implications for the Roadside Conservation Management Plan

The *Planning and Environment Act 1987* provides the legislative framework for the Macedon Ranges Planning Scheme which establishes permit requirements for native vegetation removal (amongst other things), including on roadsides. These permit requirements need to be taken into account when developing processes and procedures for works which impact roadside vegetation.

8.7. *Catchment and Land Protection Act (1994)*

The *Catchment and Land Protection Act 1994* (CaLP) sets out a framework for managing noxious weeds and pest animal matters to prevent degradation to catchments. The Act is applicable across all public and privately managed land throughout Victoria.

The Act provides a hierarchy by which invasive species can be ranked based on their potential to degrade landscapes, both agricultural and natural, and specifies management responsibilities for land managers.

Under the Act, all landowners are required to take all reasonable steps to conserve soil, protect water resources, eradicate regionally prohibited weeds and pest animals and avoid contributing to land degradation which causes or may cause damage to the land of another land owner.

In November 2013 amendments were made to the CaLP Act to introduce the opportunity for municipal councils to prepare roadside weed and pest animal management plans. These amendments were made to clarify responsibilities for roadside weed and pest animal control.

The Act also prohibits the transportation of listed noxious weeds without a permit in order to minimise the spread of weeds.

Implications for the Roadside Conservation Management Plan
The Roadside Conservation Management Plan needs to take into account Council's obligation to manage declared noxious weeds and established pest animals on Council managed roadsides. Council's approach to these works is set out in the *Weed and Pest Animal Strategy 2014*.

In addition, the requirement for permits to transport noxious weeds has implications for how Council treats and manages noxious weeds on roadsides – i.e. weeds treated with herbicide are generally left in situ to break down rather than transported elsewhere for disposal.

8.8. *Electrical Safety Act 1998*

The *Electricity Safety Act 1998* (Vic) (ES Act) provides that a municipal council must specify, within its Municipal Fire Prevention Plan:

- procedures and criteria for the identification of trees that are likely to fall onto, or come into contact with, an electric line (hazard trees); and
- procedures for the notification of responsible persons of trees that are hazard trees in relation to electric lines for which they are responsible.

Appendix C of the *Macedon Ranges Municipal Fire Management Plan 2020-2023* outlines processes and procedures in relation to identification and notification of hazard trees and nominates responsible authorities for electrical line clearance.

Implications for the Roadside Conservation Management Plan
The Roadside Conservation Management Plan needs to take into account the need to undertake tree management works near powerlines for risk mitigation.

8.9. *Traditional Owner Settlement Act 2010, Aboriginal Heritage Act 2006, Recognition and Settlement Agreements and Land Use Activity Agreements*

These Acts set out the legislative obligations to Traditional Land Owner groups in relation to management of Victoria's resources. The *Aboriginal Heritage Act 2006* established the Dja Dja Wurrung, Taungurung, and Wurundjeri as Registered Aboriginal Parties for land that encompasses the Macedon Ranges Shire.

The *Aboriginal Heritage Act 2006* establishes processes and procedures to protect places and features of Aboriginal cultural heritage value. In particular, the Act establishes the approval processes for works deemed "high impact activities" in areas of cultural heritage sensitivity such as named waterways.

The Victorian Government has a program of negotiating "Recognition and Settlement Agreements" (RSAs) with groups of Traditional Owners under the *Traditional Owner Settlement Act 2010*. Within the Macedon Ranges, two of our three Traditional Owner groups have a RSA established. The RSA with Dja Dja Wurrung commenced on the 25 October 2013, and on the 11 August 2020 the RSA with Taungurung formally commenced.

A key component of RSAs is the requirement for Land Use Activity Agreements (LUAA). LUAAs provide a process for managing activities on public land that may have an impact on the rights of the Traditional Owner groups. Different procedures are required depending on the impact on Traditional Owner rights. Basically, the greater the impact, the greater the level of procedural rights.

The LUAA applies to "public land" (often called Crown land). This includes unreserved Crown land, reserved Crown land, and reserved forests, national parks, nature reserves and state wildlife reserves. The LUAA does not apply to roads already built before 25 October 2013, unless the activity is upgrading the road. "Upgrades" could include lane widening, construction of rest areas, junction improvements, road realignments, road duplications, or construction of pedestrian or cyclist facilities.

Section 3 of the LUAA outlines procedural categories for activities undertaken on crown land. The categories, with an example of when they apply, are as follows:

- **Routine** - *eg. Maintenance of grounds, roads and tracks*. For routine activities there is no requirement to notify the Traditional Owner Corporation. The activity may proceed immediately.
- **Advisory** – *eg. Road improvement (from one class to another)*. Advisory activities require notification of the Traditional Owner Corporation and, depending on their response, an appropriate consultation process.
- **Negotiation** – *eg. Construction of new roads, tracks and bridges where there is no existing footprint*. Negotiation activities require notification of the Traditional Owner Corporation.
- **Agreement** – *eg. The sale or long-term commercial leasing of public land*. The Traditional Owner Corporation must provide its consent before an activity can proceed.

Implications for the Roadside Conservation Management Plan

For any road upgrade or construction of new roads, bridges or tracks, Council must ensure it adheres to the processes outlined in the LUAA. Compliance with the RSA and LUAA for Dja Dja Wurrung and Taungurung is legally binding and a whole of organisation responsibility. For Council staff, there are resources to help determine when a LUAA is required for works (found at https://www.justice.vic.gov.au/your-rights/native-title).

Preparation of a Cultural Heritage Management Plan may be required for works within the road reserve which are close to waterways or other registered sites of Aboriginal cultural heritage sensitivity.

Discovery of Aboriginal cultural heritage places or objects to be reported to Aboriginal Victoria.

Local Legislation

8.10. *Macedon Ranges Planning Scheme*

The Macedon Ranges Planning Scheme sets out planning policies and permit requirements for development and works in the shire, including for vegetation removal. The Scheme includes state-wide provisions as well as local planning policies and overlays aimed at protecting locally significant environmental assets.

The key planning provisions and overlays relevant to roadside management are Clause 52.17 (Native Vegetation), Clause 42.01 (Environmental Significance Overlay), and Clause 42.02 (Vegetation Protection Overlay). A number of permit requirements and exemptions apply under these three provisions which are outlined below and summarized in Table 2.

Clause 52.17 (Native Vegetation) - State-wide provision relating to native vegetation removal which applies across Victoria. A permit is required for the removal, destruction or lopping of native vegetation, including dead vegetation. This clause does not apply:

- **Dead vegetation** – to dead vegetation with a trunk diameter of less than 40 centimetres at a height of 1.3 metres above ground level
- **Emergency works** – if the native vegetation presents an immediate risk of personal injury or damage to property.
- **Regrowth** – to regrowth that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation and is less than 10 years old or within the boundary of a timber production plantation.
- **Road safety** – to maintain the safe and efficient function of an existing road managed by a public authority or municipal council in accordance with the written agreement of the Secretary of the Department of Environment, Land, Water and Planning (DELWP).
- **Fire prevention** – to native vegetation removal to carry out any of the fire protection activities such as fire fighting, planned burning, making or maintenance of a fire access or fuel break with a width of up to 6 metres, electrical line clearance and minimising the risk to life and property from bushfire on a roadside of a public road in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning.

Clause 42.02 (Vegetation Protection Overlay) – State-wide provision aimed at protecting specific environmental assets which is applied to local areas requiring greater oversight of buildings, works and vegetation management that may impact local assets. A permit is required to remove, destroy or lop any vegetation specified in a schedule to the overlay. The Macedon Ranges Planning Scheme contains nine (9) schedules, each with different permit triggers for either specific species, all native species or all vegetation. Regardless of the schedules, the permit trigger does not apply:

- **Emergency works** – if the native vegetation presents an immediate risk of personal injury or damage to property.
- **Regrowth** - to regrowth that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation within the boundary of a timber production plantation.
- **Road safety** – to maintain the safe and efficient function of an existing road managed by a public authority or municipal council in accordance with the written agreement of the Secretary of the Department of Environment, Land, Water and Planning (DELWP).
- **Fire prevention** – to native vegetation removal to carry out any of the fire protection activities such as fire fighting, planned burning, making or maintenance of a fire access or fuel break with a width of up to 6 metres, electrical line clearance and minimising the risk to life and property from bushfire on a roadside of a public road in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning.

Clause 42.01 (Environmental Significance Overlay) – State-wide provision aimed at protecting vegetation which is applied locally to areas requiring greater oversight of vegetation management. A permit is required to remove, destroy or lop any vegetation, including dead vegetation. This does not apply:

- **Emergency works** – if the native vegetation presents an immediate risk of personal injury or damage to property.
- **Regrowth** - to regrowth that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation within the boundary of a timber production plantation.
- **Road safety** – to maintain the safe and efficient function of an existing road managed by a public authority or municipal council in accordance with the written agreement of the Secretary of the Department of Environment, Land, Water and Planning (DELWP).
- **Fire prevention** - to native vegetation removal to carry out any of the fire protection activities such as fire fighting, planned burning, making or maintenance of a fire access or fuel break with a width of up to 6 metres, electrical line clearance and minimising the risk to life and property from bushfire on a roadside of a public road in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning.

Table 2 – Summary of permit requirements on roadsides under Clause 52.17, the Vegetation Protection Overlay and Environmental Significance Overlay

Works	Cl 52.17	VPOs	ESOs
Remove a native tree, shrub or grasses	✓	✓	✓
Remove a non-native tree, shrub or grass	X	✓ Except VPO1, VPO2 & VPO7	✓
Remove dead vegetation	✓ Other than trees with a trunk diameter of 40cm or more	✓	✓
Lop more than 1/3 of the canopy of a native tree	✓	✓	✓
Remove regrowth on land lawfully cleared	X Provided the vegetation is bracken or less than 10 years old	X Provided the vegetation is bracken or less than 10 years old	X Provided the vegetation is bracken or less than 10 years old
Remove planted native vegetation	X Other than vegetation planted using public funding	X	X
Emergency works – i.e. where the vegetation presents an immediate risk of personal injury or to property	X	X	X
Mowing / slashing native grasses	X Provided grass maintained at 10cm or higher	X	X
Remove firewood for personal use	X	X	X
Remove vegetation to minimise fire risk	X With the written agreement of the DELWP Secretary	X With the written agreement of the DELWP Secretary	X With the written agreement of the DELWP Secretary
Remove vegetation associated with road safety and maintenance works	X With the written agreement of the DELWP Secretary	X With the written agreement of the DELWP Secretary	X With the written agreement of the DELWP Secretary

Implications for the Roadside Vegetation Management Plan

A permit is generally required for the removal, destruction or lopping of native vegetation, including dead vegetation. Council does have a written agreement with the Secretary of DELWP in relation to road safety and maintenance works which provides an exemption for requiring a permit in most circumstances. Council does not have a written agreement in relation to fire prevention works on roadsides. Therefore, the exemption listed under Clause 52.17, 42.01 and 42.02 does not apply and a permit is required.

8.11. *Road Management Plan 2017*

Council's *Road Management Plan* was adopted by Council on 26 July 2017. The Plan establishes service standards aimed at providing a safe and efficient network of municipal roads in accordance with Council's responsibilities under the *Road Management Act 2004*.Table 3 summarizes the maintenance standards for vegetation included in the Road Management Plan 2017. Figure 2 identifies the area that is defined as "the road maintenance envelope".

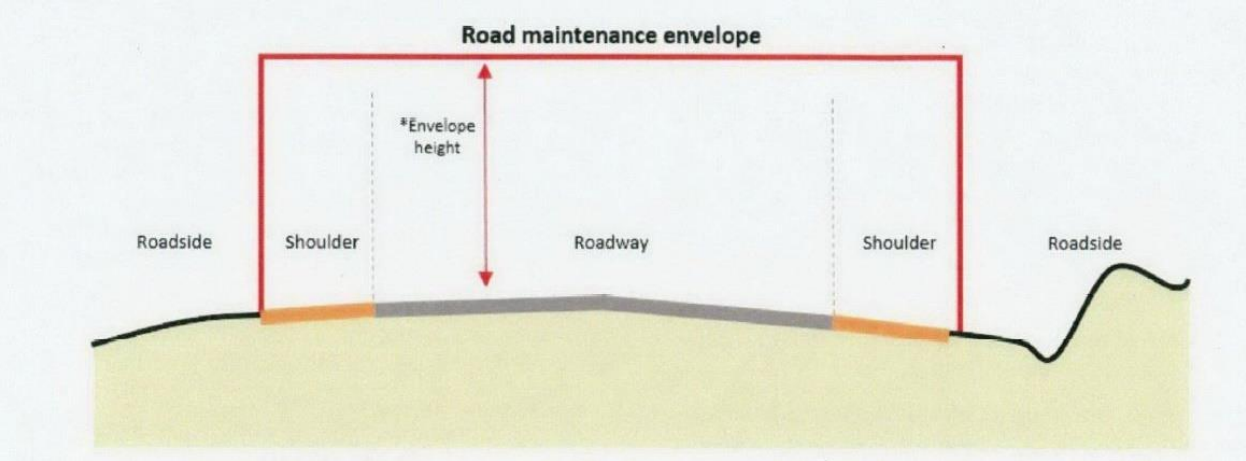


Figure 2: Road maintenance envelope

Table 3: Maintenance standards for vegetation

Category	Type	Vegetation to be kept clear in the following space	Grass mowing / slashing
1	Sealed link	5m height over traffic lanes or trafficable portion of the shoulder.	Trees, shrubs and grasses that have grown to restrict design sight distance to intersections or restrict viewing of regulatory or warning signs.
2	Sealer collector	4m height over traffic lanes or trafficable portion of the shoulder.	
3	Sealed Access	4m height over traffic lanes or trafficable portion of the shoulder. 4.5 m where heavy vehicles are permitted.	
4	Unsealed collector	4m height over centre of road surface for the trafficable width. 4.5 m where heavy vehicles are permitted.	
5	Unsealed access	4m height over centre of road surface for the trafficable width. 4.5 m where heavy vehicles are permitted.	
6	Unsealed local	4m height over centre of road surface for the trafficable width. 4.5 m where heavy vehicles are permitted.	
FAT	Fire Access Track	4m height over centre of road surface for the trafficable width. 4.5 m where heavy vehicles are permitted.	

Implications for the Roadside Conservation Management Plan

Vegetation maintenance on roadsides must meet the standards set out in the Road Management Plan.

8.12. *General Purposes and Amenity Local Law No 10, 2013*

Vegetation management
Council's General Purposes and Amenity Local Law No 10 2013 includes the following General Requirement:

> *(3) Unless a use or activity is permitted on Council land or a road by this Local Law a person must not:*
>
> *(a) remove or add to, interfere with or cause damage to Council and or a road or to anything located on Council land such as fencing, infrastructure or vegetation including dead trees or fallen limbs from trees*

Firewood collection
Council's General Purposes and Amenity Local Law No 10 2013 includes the following requirement relating to collection of firewood:

> *12. Permit for collecting firewood and planting on nature strips*
>
> *(1) A person must obtain a permit to collect and remove firewood, including dead trees and fallen branches from a road reserve.*

Note that when a planning permit is required for vegetation removal for road management, no permit under Council's General Local Law 10 is required.

Environmental Activity on Roadsides Permit
The Environmental Activity on Roadsides Permit was designed for residents who want to carry out any activity on rural roadsides and reserves or town native nature strips. The permit is applicable to activities that:

- impact on Council land, fencing and infrastructure, and/or
- involve the removal of firewood or vegetation, including removal of dead trees or fallen limbs from trees and weed control

Implications for the Roadside Conservation Management Plan

Under Local Law no. 10, landholders must apply to Council for a permit to undertake any activities on roadsides including firewood collection and removing dead trees and fallen branches.

8.13. *Municipal Fire Management Plan 2020-2023*

Fires start on roadsides due to hot vehicle exhausts, mechanical failures, collisions, cigarette butts and deliberate ignition, hence roadsides are important for the implementation of fire prevention programs. The CFA Roadside Fire Management Guide articulates both the importance of roadside fuel reduction and complexities often associated with this.

The *Municipal Fire Management Plan 2020-2023* was developed by the Municipal Fire Management Planning Committee (MFMPC) to reduce the incidence and consequences of fire across the landscape. The Plan takes an all hazards approach to fire.

The Plan identifies a number of strategically located roads that meet fuel reduction objectives. These works aim to create a grid pattern across the municipality to achieve one or more of the following objectives –

- Prevent Roadside fire ignition (particularly on high traffic road corridors)
- Provide safe road corridors for the public and emergency service vehicles during a fire
- Provide a Control Line – a line where fire controllers can deliberately attempt to stop the spread of a fire
- Enable the Municipality to quickly return to normal following a fire event.

Council slashes high use roads, bus routes and roads that provide an exit in an emergency, to reduce the chances of these incidents resulting in a fire. Map C.4 in the plan outlines the Roadside Slashing Program and is provided in Appendix 5. This schedule of works has been approved by the MFMPC.

Currently in the plan there is an agreed position on the required treatment of these roadsides to clear 3 meters minimum behind the traffic guide posts where practicable, to a maximum height of 100mm**.** It is the intention of the MFMPC to undertake a science, risk based analysis of roadsides which will take into account the location, width and quality of treatments on roads identified as fire breaks. This information will then be analysed by the MFMPC and the necessary amendments will be made to this current version of the MFMP.

Implications for the Roadside Conservation Management Plan

Management of roadsides need to take into account the Roadside Fire Breaks as articulated in the Municipal Fire Management Plan 2020-2023 and any subsequent work undertaken by the MRMPC in regard to Fire Breaks. Where a road is identified as a Roadside Fire Break, it is the intention of the plan for that road reserve to have the necessary annual treatments undertaken as a priority.

The Roadside Weed Control Program helps to target the strategic roads identified in the Fire Management Plan.

Control of Nassella species needs to occur prior to annual roadside slashing to prevent spread.

8.14. Other Legislation

Various additional state or commonwealth legislation have the potential to impact on roadside management however are not considered likely to significantly impact on the implementation of this plan. These include:

- Aboriginal and Torres Straight Cultural Protection Act 1984
- AgVet Chemicals (Control of Use) Act 1992
- Australian Heritage Commission Act 1975
- Biological Control Act 1986
- Crown Land (Reserves) Act 1998
- Electrical Safety Act 1998
- Environment Effects Act 1978
- Environmental Protection Act 1970
- Fences Act 2014
- Forests Act 1958
- Heritage Act 1995
- Land Act 1958
- Mineral Resources Development Act 1990
- Pipelines Act 2005
- Road Management (Works and Infrastructure) regulations 2005
- Telecommunications Act 1997
- Transport Act 1983
- Wildlife Act 1975
- Regional Catchment Management Plans

9. Methodology

9.1. Public and stakeholder consultation

Development of this plan occurred over several years, during which time Council's processes and practices have changed.

Preliminary consultation was undertaken with a number of local groups in 2016-17 – including Bullengarook, Ashbourne and Newham Landcare, Kyneton, Woodend and Romsey CFA, the Municipal Fire Management Planning Committee and internal departments.

Key issues and ideas raised during this engagement include:

- **Drainage** - Road drainage is not effective – e.g. some mitre drains are poorly designed or located and the size of some culverts requires review
- **Encroaching vegetation** - Overhanging trees and vegetation that encroaches close to the road presents a danger to vehicles
- **Wildlife** - Need to raise awareness about wildlife on main roads, ensure there is a one metre clearance to enable wildlife to be seen, place speed limits on minor roads and map major animal corridors.
- **Weeds** – Implement vehicle hygiene to minimise the spread of weed seed, undertake weed audits or an "inventory" with the assistance of Landcare groups, engage community to treat their property when roadside weed spraying occurs.
- **Rubbish** - Rubbish dumping often occurs on roadsides, lobby for deposit legislation and plastic bag free towns, place bins at hot spot areas.
- **Education** - Conduct education with residents about environmental values of roadsides and what they can and can't do, signs need to be installed on roadsides with significant vegetation.
- **Fire Management** - Allow residents to remove firewood and fuel loads, undertake more controlled burns, enforce clean up notices, ensure buffers around townships, maintain fire access tracks.

In 2019 the Three Chain Road Fire Risk Mitigation Action Plan was develop in partnership with CFA, Landcare and local residents. While the plan focused on Three Chain Road, it also included recommendations for management and community engagement relevant across the shire.

Following the development of the Three Chain Road Fire Risk Mitigation Action Plan, an online approval system was developed called the Environmental Activity on Roadsides Permit.

In 2020, a series of workshops were held with internal teams and key community stakeholders to refine the plans objectives and proposed actions.

Review of draft Roadside Conservation Management Plan
The draft Roadside Conservation Management Plan was exhibited for public comment for six weeks from 26 April to 7 June 2021. In this time, the Council "Your Say" page received 720 page views, posts on Facebook reached 6,272 users, and Instagram reached 835 users. It attracted significant attention in the local media including seven letters to the editor.

Council received 87 responses to the online survey and 18 written responses. The feedback in the online surveys was evenly split between residents supporting a conservation focus to those wanting more of a focus on community safety by reducing vegetation cover. Most of the written submissions supported the general direction of the plan whilst offering suggestions for improvement.

In summary:

- 60% of respondents wanted the Plan to have a stronger conservation focus – 63 responses
- 40% of respondents wanted the Plan to have a stronger community safety and fire prevention focus – 42 responses

The draft plan has been updated to address the feedback from community and stakeholders. Comments and suggestions for management on individual roads has been passed onto relevant Council staff or, in some cases, Regional Roads Victoria.

The following actions were revised or added in response to community feedback:

- The following actions were revised or added in response to community feedback:
- Increased focus on Aboriginal cultural heritage protection and traditional owner engagement.
- Development of a new roadside ecological and cultural burn program.
- Expansion of the strategic weed program.
- Increased education about safe fire plans.
- Expansion of the road maintenance program to increase annual inspections and remove growth of saplings in the road verge, thereby preventing the need for tree removal in future years.
- Simplification of the 'Environmental Works on Roadsides Permit' system which enables landholders and community groups to work on roadsides.
- Inclusion of a section about post storm and fire roadside clean up works.

The final plan has been reviewed internally by all relevant Council departments.

9.2. Roadside assessments methodology

In 2004, roadside assessments were carried out on Local Government managed road reserves throughout the shire. These assessments were repeated between October 2016 and August 2018 focusing on roadsides that were originally assessed as having medium to very high conservation values. This represented about half of the roadsides in the shire.

The methods used for the 2016/17 roadside assessments were identical to those implemented in 2004. However, some additional data was added for the 2016/17 assessments including recommendations for future management and identification of recreational uses.

The roadside assessment is used to:

- Map the assessment sections
- Score the condition of roadside vegetation
- Identify other conservation values to further refine the final roadside conservation value
- Provide a useful management resource for Council

The roadside assessment method has five major components:

- Identity: delimits roadside sections
- Assessment: indicates the condition of roadside vegetation including disturbance, weed cover, canopy continuity, regeneration and adjoining vegetation.
- Assets and threats: records the assets and threats which contribute to, or detract from, the roadside's conservation value
- Points of interest: interesting features and observations made in each section.
- Species noted: including important threatened flora or fauna species observed

A detailed overview of the assessment process for these components is provided in **Appendix 2**.

The final roadside conservation score is determined through the combination of roadside status and condition information. In applying these methods, the final score provides a comprehensive representation of asset values. This allows strategic management, comparable results, and clearly identifies whole of landscape priorities.

9.3.Conservation categories

Each roadside section is attributed a conservation value of "low", "medium", "high" or "very high" depending on its roadside conservation value score out of 60. In some instances, roadsides that

received a low score require special management – e.g. due to their grassland qualities (the scoring matrix preferences the presence of trees), the presence of a threatened species or the presence of high threat grassy weeds. These roadsides were categorized as “special” and are listed in **Appendix 4.**

Table 4: Conservation categories

Low

Score Range:
1 to 10 (out of 60)

Description:

- Substantially disturbed
- High cover of exotic species, including exotic pasture grasses
- Generally no native understory, shrub layer or canopy
- Some large old trees may be present
- Few habitat values present

Incorporates the ‘*exotic / degraded treeless vegetation’* classification used in 2006-08.

Roadside section 1414 - Cowells Road, Newham. Score 7/60. Indigenous vegetation absent or virtually absent. Cypress hedge (on neighbouring property) and scattered mature Pine trees the only significant features.

Roadside section 13329 – Three Chain Road, Cobaw. Dominated by pasture grasses. Utilised by adjoining landholder for grazing.

Medium

Score Range:
11 to 34 (out of 60)

Description:

- Low to moderate soil disturbance
- Some indigenous ground flora
- Either mid-storey and/or canopy species present
- Exotic species never dominant, however they may exclusively represent a strata – for example patches of woody weeds under an indigenous canopy
- Large trees generally absent
- Some, but not all habitat values present

Roadside section 1465 - Straws Lane, Newham. Score – 32/60. Low levels of soil disturbance as evidenced by ground flora present. Absence of mid-story / shrub layer.

Roadside Section 1114 - Colwells Road, Newham (left) Score 27/60. Roadside Section 1417 – Colwells Road, Newham (right)

High

Score Range:
35-54 (out of 60)

Description:

- Limited or minimal soil disturbance.
- Native ground flora always present.
- Typically less than 25% weed cover
- Large trees may or may not occur
- Typically a range of habitat values present such as

Roadside Section 13432 – Bryces Lane, Hesket. Score 38/60. Canopy, midstorey and groundstorey layers all present although not necessarily continuous. Some woody weeds present however not high cover. Woody debris and leaf litter present.

woody debris, surface rock, tree hollows or stumps

Roadside Section 13434 – Bolgers Lane, Hesket. Score 35/60. Canopy, midstorey and groundstorey layers all present although not necessarily continuous. Large trees absent however many other habitat values present. Low to moderate levels of soil disturbance contributing to minimal weed cover.

Very High

Score Range:
55-60 (out of 60)

Description:

- Soil disturbance near natural
- Weed cover < 5%.
- Large old trees generally present
- Evidence of natural regeneration
- Most if not all habitat values present

Roadside Section 13368 – Monument Road, Lancefield. Score 56/60. All three layers of the strata present, including multiple age classes of shrubs indicating mid-storey recruitment. Abundant ground-storey vegetation is evident and there is a virtual absence of all exotic species. Large trees are present, as well as the associated key habitat features of woody debris and leaf litter.

Special

Score Range: Any

Description:

- Grasslands
- Wetlands
- EPBC or FFG Act listed species or communities
- Nassella species sometimes present which requires special management.

Roadside Section 4548 – Heaths Lane, Clarkefield. Score 38/60. Significant grassland community. Dense Kangaroo Grass.

10. Conservation value of roadsides in the Macedon Ranges

10.1 Macedon Ranges Shire conservation values

Macedon Ranges Shire has a high conservation value. The landscape is very diverse, with contrasting features such as the mountainous areas of the Great Dividing Range including Mount Macedon, volcanic eruption points at Hanging Rock, Camels Hump, Bald Hill, Mount Gisborne, Magnet Hill, Mount Aiken and Mount Bullengarook, and the grassy, flat volcanic plains around Kyneton, Gisborne and Lancefield.

Despite large-scale clearance of vegetation for farming and settlements, the Macedon Ranges retains significant native vegetation in relative good condition, much of it on private land. Consolidated areas of native vegetation occurs across the ranges from Mount Macedon to the Lerderderg National Park and across the Cobaw Range to the north of the municipality. Intact native vegetation is also present along ridgelines and rocky outcrops.

There are some 138 flora and fauna species listed as rare or threatened within the shire, many of which occur on roadsides. Floristically, the Shire has 68 rare and threatened species including 10 listed under both the FFG and EPBC Acts and an additional 9 species listed under the FFG Act. In terms of fauna, the shire has 70 rare and threatened species, including 19 species listed under both the EPBC and FFG Acts and an additional 26 species listed under the FFG Act.

Figure 3: EPBC listed, the Golden Sun Moth, has been found on a number of roadsides in the Shire including Portwines Rd in Lauriston and Kings Drove in Lancefield.
Photo: William Terry

10.2 Roadside conservation values

In Victoria, roadsides are widely recognised as significant refuges for flora and fauna as well as providing connectivity across the landscape. This is particularly the case for relatively fertile grassy landscapes, where the land has been heavily cleared, degraded and fragmented for agricultural use. Roadside vegetation often supports some of the best remaining examples of remnant native vegetation due to their history of protection from grazing and cropping practices. As a result, it often supports endangered vegetation communities and threatened species which are not found elsewhere.

This is very much the case for the Macedon Ranges. Across the Shire, intact native vegetation along waterways and roadsides provides important habitat and connectivity to otherwise fragmented patches of vegetation.

Native vegetation helps stabilise road infrastructure by reducing erosion. It also provides buffers and filter strips that can reduce sediment entering waterways. In addition to environmental values, this native vegetation may also provide aesthetic and cultural value.

Many stretches of roadside vegetation in the Shire are noted for their significant plant and animal species. A flora survey in 2016 of high value roadside reserves throughout Newham and surrounding areas listed 232 that are indigenous species, five of which are listed under the Victorian Advisory List and one of these is also listed as threatened under the EPBC Act and FFG Act (Just, 2016).

In partnership with Newham Landcare, Council completed spotlight surveys along significant roadsides throughout the Cobaw Biolink. The surveys found that the region contains very rich habitat for a range

of fauna. 467 observations from 21 species of mammals, birds and frogs were recorded including Brush-tailed Phascogale, Feather-tailed Glider, Sugar Glider, Koala and a range of night birds including Boobook Owls and Barn Owls. These are significant findings, especially if compared to similar spotlight surveys undertaken around the Wombat State Forest and Mount Macedon. Averaged out, 93.4 animals per km were observed on roadsides in the Cobaw Biolink, compared to 10.37 records per km in surveys completed on Mount Macedon and in the Wombat State Forest.

Many of roadside vegetation patches also contain high quality remnant plant communities that are poorly represented in the regional conservation reserve system. For example, Scoria Cone Woodland with *Eucalyptus pauciflora* (Snow Gum) and a herb-rich ground-layer, a vegetation type that is exceedingly rare in Victoria, survives along Hennebergs Road. Nearby Three Chain Road, Sheltons Road and Bolgers Lane host large areas of woodland and forest containing rare herb-rich groundflora with a high cover of lilies, daises and other herbs (Just 2016).

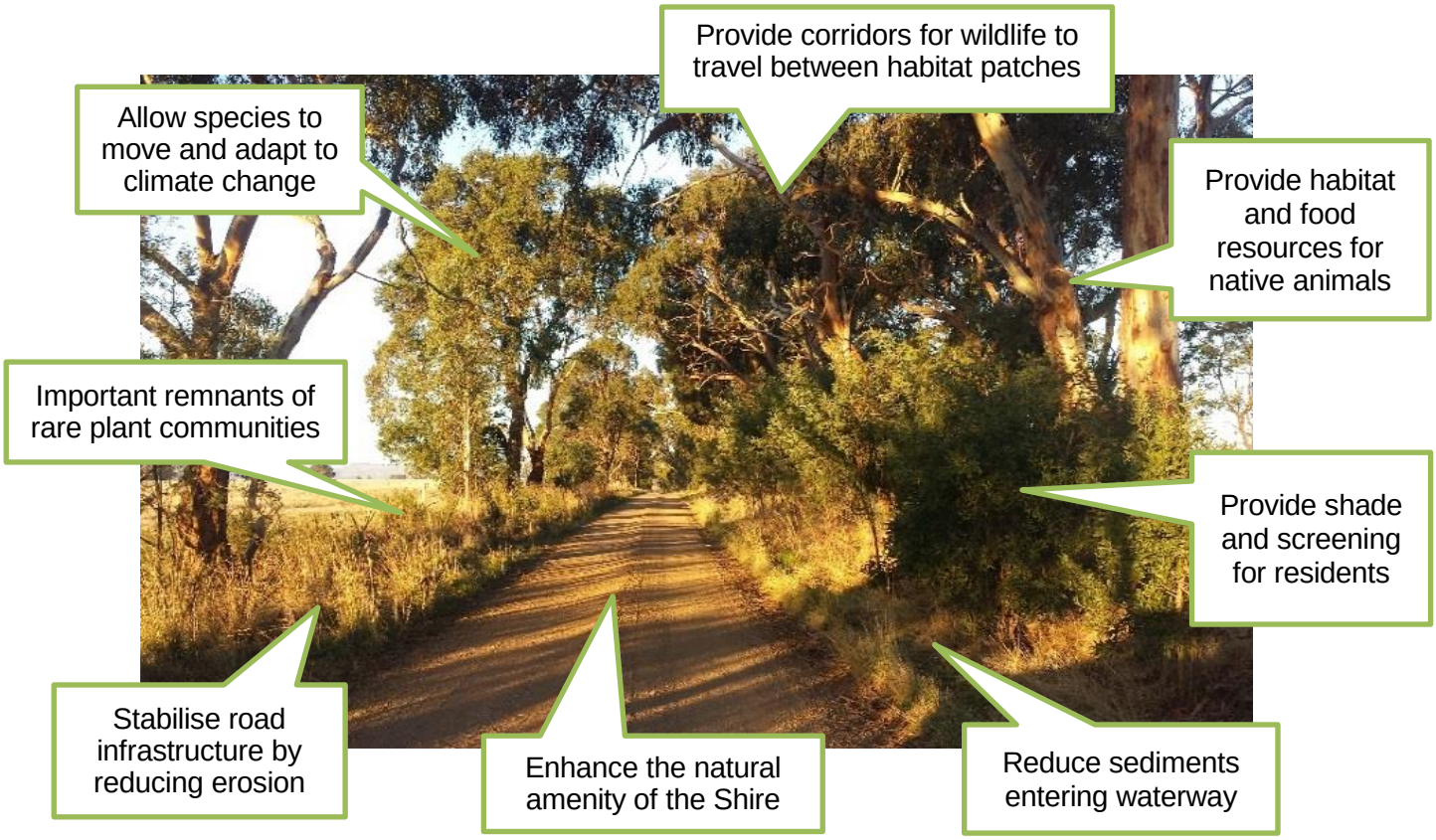
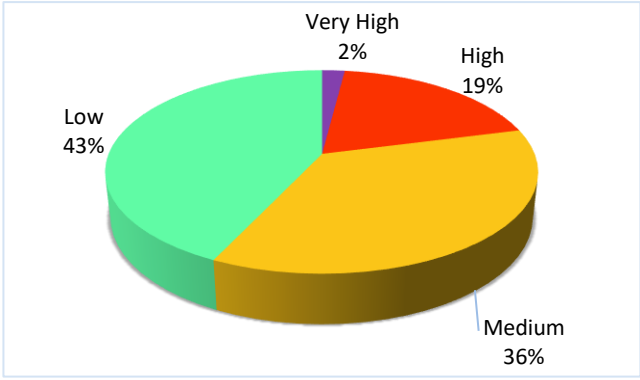


Figure 4: Significant natural values of roadsides

The roadside assessments determined that 21% of the roadsides in the Macedon Ranges have high to very high conservation value. A further 36% scored medium. These conservation values are derived from the presence of trees, mid-storey shrubs and ground cover.

All of these components play an important role through the provision of food and shelter for native animals, birds and insects. A roadside with only one of these strata is still vital from a conservation perspective.



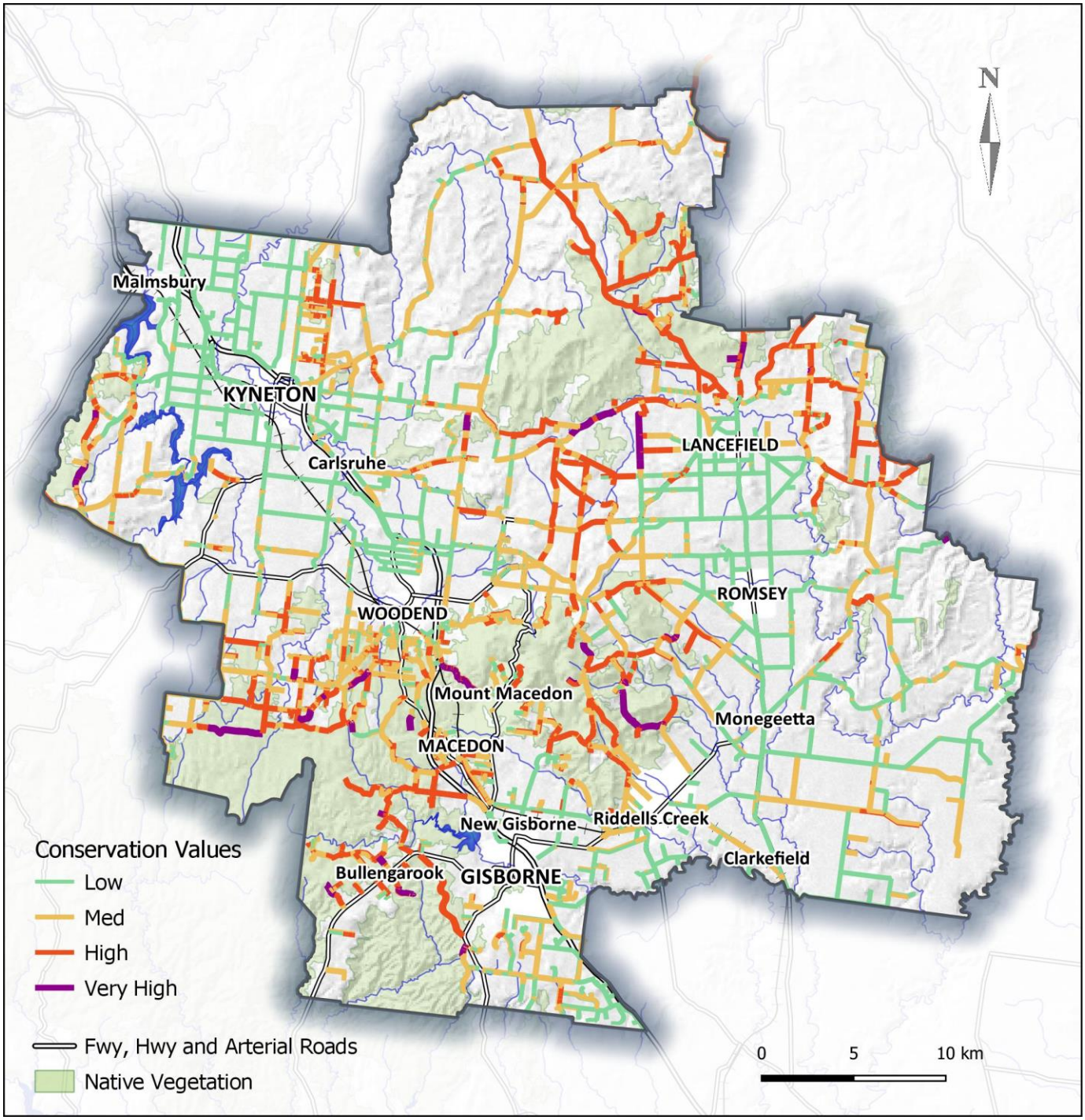


Figure 5: Map of roadside conservation values across the Macedon Ranges Shire.

10.3 Threats to roadside vegetation

All roadside vegetation faces ongoing threats from a range of processes, including weed invasion, grazing pressure, vegetation clearance and roadworks. Due to the linear shape and close proximity to roads, they are particularly vulnerable to edge effects and the processes of fragmentation.

The degradation of roadside vegetation is often an incremental process, whereby the gradual loss of small areas to activities such as roadworks or mowing by adjoining landholders in time accumulates into major degradation of high value areas. Without due care and management the integrity and quality of the shire high value roadsides are at risk.

The following images highlights some of the key threats to significant roadside vegetation. A comprehensive list of threats is provided in **Appendix 2**. These activities are predominately not due to negligence or deliberate intent. They can be addressed through the identification of high value roadsides and the implementation of policies and procedures that aim to have minimal impact of roadside vegetation.

Grading for drainage lines. Photo: Newham Landcare

Dumping of spoils Photo: MRSC

Mowing and clearance Photo: Newham Landcare

Driving and parking Photo: Newham Landcare

Woody Weeds Photo: MRSC

Tree Removal Photo: MRSC

Climate Emergency

Roadside vegetation is more vulnerable than ever due to climate change. It will be impacted by hotter and drier conditions and more frequent storm and fire events. Native vegetation such as Snow Gums and the wet forests of Mount Macedon are particularly at risk.

On 24 March 2021, Council declared a state of Climate Emergency. By doing so, Council acknowledges that urgent action is required to address the causes and impacts of climate change. The community needs to build resilience to more heat waves and increased emergencies.

In response to the climate emergency, roadside vegetation plays an important role in carbon sequestration and temperature regulation as well as landscape connectivity for native animals.

Part 2 - Roadside Conservation Management Plan

11. Vision

The conservation values of roadsides in Macedon Range Shire are protected and enhanced whilst maintaining community safety.

12. Themes and Objectives

The Roadside Conservation Management Plan has the following six themes and related objectives.

Table 5: Roadside Conservation Management Plan - Themes and Objectives

Theme	Objectives
Conservation	• **Protect** remnant native vegetation on roadsides, including threatened species and communities. • **Improve** the condition of native vegetation on roadsides. • **Connect** roadside habitat through strategic revegetation on low conservation value roadsides • **Monitor** change in roadside conservation values. • Protect known and potential cultural heritage values on roadsides
Fire risk management	• Minimise the chance of ignitions and ensure that fires that start on or close to the road are more likely to be contained whilst preventing negative impacts to native vegetation. • Prevent the spread of weed seed by slashing contractors
Drainage and road maintenance	• Fulfil Council's obligations under the Road Management Plan to maintain a clear road envelope for the safe passage of vehicles and adequate sight lines for traffic while minimising ecological impacts. • Fulfil Council's obligations under the Road Management Act to allow for the safe passage of vehicles while minimising ecological impacts of road widening and reconstructions. • Ensure drains operate effectively to maintain road safety while minimising ecological impacts • Reduce the impact of roadworks on roadsides by maintaining a limited number of spoil and stock pile sites across the Shire. • Respond to fallen trees in a timely and considered manner, ensuring safe passage along roadsides while reducing impact on native vegetation.
Services and utilities	• Seek to avoid or minimise impacts on native vegetation while ensuring community safety and delivery of essential services.
Recreation	• Allow for walking, cycling or riding on appropriate roadsides whilst protecting high value and significant vegetation.
Adjoining landholders, licenses and permits	• Enable land owners to lawfully conduct fuel management on rural roadsides while maintaining biodiversity values. • Reduce illegal native vegetation removal and unauthorised works on roadsides • Prevent inappropriate collection of firewood and maintain appropriate levels of log litter for habitat and environmental functions. • Manage local resident use of roadsides ensuring minimal impact on native vegetation.

In this plan, each theme highlights the current activities, relevant issues and opportunities. It then sets out clear objectives, guiding principles and actions. The actions, where relevant, include policy and regulatory responses, internal protocols and community engagement.

13. Guiding Principles

The following series of principles should help to guide works on roadsides according to the assessed roadside conservation value.

Table 6: Roadside Conservation Management Plan – Guiding Principles

Roadside Conservation Value	Goal	Guiding principles
High and Very High	Conservation value of very high value roadsides is maintained. Conservation value of high value roadsides is improved	• Retain current quality of roadside vegetation • Retain logs and stags as habitat • Maintain species diversity • Remove key threats such as noxious and environmental weeds • Work within the road maintenance envelope only • Leave large logs ad stumps, but remove limbs and branches that have been cleared or have fallen. • Avoid slashing or limit to 3m • Re-use the same mitre drains and maintain them • Remove spoils off-site to designated dump sites • Designate work zones and 'no go' areas • Limit impacts from recreational use • Fuel management not permitted unless required to meet EVC benchmarks for logs and leaf litter.
Medium	Conservation value of roadside is improved.	• Encourage the transition of understory vegetation from exotic species to indigenous species • Encourage natural regeneration • Reduce weeds to elevate fire risk and reduce competition • Limit slashing to 3m • Prioritise restoration and revegetation in biolink areas and strategic habitat links. • Fuel management may be permitted if the nature of the works minimises detrimental biodiversity impacts.
Low	Strategically restore habitat values to increase landscape connectivity and reduce threats.	• Monitor for new weed species. • Prioritise Nassella species control • Prioritise revegetation on low conservation roadsides within identified biolink areas and strategic habitat links. • Undertake annual fuel management.

Figure 6: High value roadside vegetation along Sheltons Road, Newham Photo: Karl Just

14. Conservation

Current activities

- **Roadside weed control -** annual roadside weed control program and annual audit of weed percentage cover.
- **Environmental planning -** protection of native vegetation through implementation of state government native vegetation regulations and local Vegetation Protection Overlays.
- **Review of Overlays -** review of roadside Vegetation Protection Overlays (in progress).
- **Biodiversity monitoring -** annual biodiversity monitoring program, including bird surveys, nest box checks and spotlight surveys at monitoring sites. Targeted threatened species surveys (ad hoc).
- **Permit process –** administration of an Environmental Activity on Roadsides Permit Process

Issues

- **Knowledge -** lack of awareness of the value of roadside vegetation amongst Council staff and community members or how to identify high value areas.
- **Threatened species** – little knowledge of species nor location of threatened species on our roadsides by Council or community.
- **Landscape function** – lack of continuity in vegetation impacting habitat connectivity.
- **Wildlife crossing** – resident concerns that roadside vegetation conceals wildlife, especially Kangaroos and Wallabies, and results in wildlife collisions.
- **Declared noxious weeds** - weed invasion, including from machinery, vehicles, horses and other users. High priority declared noxious weeds include:
    - Grassy weeds – Serrated Tussock, Chilean Needle-grass and Texan Needle-grass.
    - Woody weeds - Gorse, Blackberry, Cape Broom and English Broom.
- **Environmental weeds** – invasive grasses and herbs such as Sweet Vernal Grass, Blue Periwinkle (Vinca major) and Ragwort that outcompete native species.
- **Pest animals** – unknown extent and impact of pest animals on roadsides.

Opportunities

- **Landscape function** - Develop a restoration / revegetation program along strategic roadsides and old spoil sites to enhance landscape connectivity.
- **Wildlife crossing** - Partner with the Macedon Ranges Wildlife Network to explore innovative approaches to wildlife signage, crossings and barriers at identified hot spots.
- **Awareness raising** – Including:
    - Encourage community members to play an advocacy role for roadsides in their area.
    - Review and update “significant roadside vegetation” signage.
    - Use roadside vegetation as a means of elevating public awareness about the shire’s conservation values.
    - Use coloured stickers on guide posts for brush down point, noxious weeds, and areas of high conservation significance.
    - Update intramaps with the roadside conservation value mapping and known locations of threatened species.
    - Work with customer service and operations to update processes in order to identify roadside conservation value to trigger appropriate response.
    - Raise awareness about the permits for collection of native seed from roadsides
- **Weeds** – Expand the annual roadside weed control program to include treatment of environmental weeds in medium to very high conservation areas. Ensure on-site signage so community members are aware of spraying, particularly of Blackberry.
- **Monitoring** – Continue long-term monitoring program which encompasses many roadside vegetation locations to better understand the use of roadsides and change over time. Share results broadly with internal staff and the community.

Conservation - Objectives, Principles and Actions

Objective	Guiding Principle	Regulatory Response	Internal Protocols and Actions	Community Engagement
Protect remnant native vegetation on roadsides, including threatened species and communities.	Maintain high and very high conservation value roadsides and improve medium value roadsides through: • Retaining logs and stags as habitat • Maintaining species diversity • Remove key threats such as noxious and environmental weeds • Working within road envelope only	Update existing roadside Vegetation Protection Overlays (in progress) Ensure compliance with the EPBC Act and FFG Act in the event that threatened species or communities may be impacted by maintenance or construction works. Ensure presence of listed threatened species triggers a detailed assessment and/or management plan if works planned for roadside. Advocate for the ability to set lower speed limits on unmade roads and reduce speed limits in wildlife crossing areas.	Implementation of EPBC and FFG Act – Develop an internal engagement/education program that ensures all staff and contractors are aware of listed threatened species, their locations and Council's obligations for compliance. Known locations of listed threatened species from VBA are mapped and available on Intramaps, updated annually. Develop a program targeting specific threatened species and communities. Actions to include monitoring, inclusion in VPO, dedicated signage, ecological burns for grasslands. Install marker pole stickers for Council Operations staff to identify: - High and very high roadsides (no dumping, no turning, no slashing) - Brush down points - Spoil dumping areas Develop a "ute guide" for Council staff and contractors about roadside management, map of conservation value, guide to the markers, contacts, and key threatened species.	Review and update the Significant Roadside signage. Criteria for placement: • High and very high conservation value and: • Roadsides over 10m wide; or • Higher use roads; or • Roadsides where conservation values are not self-evident Hold annual roadside information sessions and walks in different locations covering topics such as: • Vegetation and fire risk • What's on my roadside? • Weed control Work with Wildlife Network to identify 'hot spots' for collisions and ensure these locations are sign posted. Include native seed collection in the Environmental Activity on Roadside Approval process. Require contractors to install on-site signage where Blackberry spraying has occurred.

Objective	Guiding Principle	Regulatory Response	Internal Protocols and Actions	Community Engagement
Improve the condition of native vegetation on roadsides.	Improve roadsides and encourage the transition of understory vegetation to indigenous species through: • Encouraging natural regeneration. • Reduce weeds to elevate fire risk and reduce competition.	Review the Weed and Pest Animal Strategy to reflect priorities in the biodiversity strategy and roadside management plan. Priorities to include strategic fire management roads, med/high conservation significance, biolink areas, controlling spread of Nassella species, previous investment and community concern	Develop a roadside cultural and ecological burn program to be delivered with a focus on high use, medium conservation value grassland and plains grassy woodland roadsides. Investigate partnering treatments of chemical control with ecological burns. Refer to list of sites in Appendix 4 as a priority. Expand the strategic weed program to include treatment of environmental weeds in medium to very high conservation areas targeting major thoroughfares where it is difficult to slash to reduce biomass eg. pasture grasses (subject to resourcing). Continue to send letters to neighbouring properties where infestations are impacting on high and very conservation value roadsides.	Continue to support community groups to undertake weed control on local roadsides through the Community Weed Partnership Program. Involve Traditional Owners, Landcare, CFA and adjoining landholders in the burn program to increase knowledge and understanding of role and use of fire in the landscape.
Connect roadside habitat through strategic revegetation on medium and low conservation roadsides	Prioritise revegetation on low conservation roadsides within identified biolink areas and strategic habitat links.		Develop a Roadside Restoration Program that identifies priority locations for revegetation in biolink areas and strategic habitat links as identified in the Biodiversity Strategy (appendix 8). Target low use local roads that are not identified in the municipal fire plan or likely to be developed into the future. Initially focus on introducing scattered native canopy trees. Investigate potential for replacement of exotic grasses with native understorey.	Engage community groups in local roadside restoration projects. Support revegetation by private land owners and community groups on low conservation roadsides provided: • Sight lines are maintained • Locally indigenous species are used

Objective	Guiding Principle	Regulatory Response	Internal Protocols and Actions	Community Engagement
			Implement a restoration program of larger disused areas (eg. spoil sites) to reduce weeds and create important habitat patches across the landscape.	
Monitor change in roadside conservation values.	Implementation of long-term fauna monitoring program focusing on rural roadsides in biolink areas. Roadside conservation significance to be re-assessed every 10 years.	Record all threatened species observations in the VBA	Undertake pre and post fire monitoring assessments where possible. Undertake annual roadside audits to inform implementation of the Strategic Weed Program. Review the roadside assessment and mapping process prior to next assessment round.	Engage community members in monitoring events and citizen science.
Protect known and potential cultural heritage values on roadsides	Aboriginal and other cultural values often intersect with natural values on roadsides and require separate management responses pursuant to legislation and processes.	For any road upgrade or construction of new roads, bridges or tracks, adheres to the processes outlined in the LUAA and Aboriginal Heritage Act. Follow protocols and check registers to meet heritage obligations for state and local heritage listed monuments and trees.	Preparation of a Cultural Heritage Management Plan may be required for works within the road reserve which are close to waterways or other registered sites of Aboriginal cultural heritage sensitivity. Discovery of Aboriginal cultural heritage places or objects to be reported to Aboriginal Victoria.	Traditional Owner groups encouraged to be involved in the on ground implementation of plan including the ecological and cultural burns, weed program and slashing program.

15. Fire Risk Management

15.1. Fire Risk Management by Council

Current activities

- **Council's fire prevention works -** guided by the Municipal Fire Management Plan 2020-2023, works include fuel reduction and treatment of weeds on strategic roadsides.
- **Slashing program -** Council slashes high use roads, bus routes and roads that provide an exit in an emergency, to reduce the chances of fires starting on roadsides. In 2021-22, the roadside slashing budget increased due to the changing landscape and developments throughout the shire. The schedule of works is provided in the Municipal Fire Management Plan. A map of the slashing program as set out in the Municipal Fire Management Plan is provided in **Appendix 5**.
- **Weed Control** – Weed control is conducted for biomass reduction ensuring that large patches of treated woody weeds are groomed or mulched to reduce fire risk
- **Vehicle hygiene** – Council's Vehicle Hygiene Manual aims to provide information on the prevention of weed spread relevant to Macedon Ranges Shire staff and contractors. The manual outlines:
    - The importance of vehicle hygiene in preventing weed spread
    - The legal responsibilities in relation to weed spread prevention
    - Practical steps and procedures that can be taken to reduce the likelihood of weed spread
    - Vehicle hygiene protocols
- **Three Chain Road Fire Risk Mitigation Action Plan -** This plan sets out a range of roadside management actions aimed at mitigating fire risk while protecting and enhancing roadside conservation values along the length of Three Chain Road from Carlsruhe to Lancefield.
- **CFA Community Education –** The CFA offers community information guides, practical bushfire planning workshops, community fireguard, and Fire Ready meetings to support landholder prepare for the fire season.
- **Fire Prevention Notices -** In the lead up to, and during summer, Council conducts property inspections to check for fire hazards. If a fire hazard is identified, a Fire Prevention Notice is issued outlining the work you need to do and by when.
- **Fire access tracks –** Ongoing maintenance as identified in the Municipal Fire Management Plan. Map of Fire Access Tracks provided in **Appendix 5**.
- **Permits for fire risk management activities –** See table 7 detailing the permission required for residents wishing to undertake fire risk management activities on roadsides.

Table 7: Permits required for fire risk management activities.

Activity	Permission required
Removal of logs and leaf litter	Local Laws Permit via online Environmental Activity on Roadsides Form
Brush-cut understory	Local Laws Permit via online Environmental Activity on Roadsides Form
Mowing or slashing grass to less than 10cm	Planning Permit
Lopping more than 1/3 of the canopy of a native tree	Planning Permit
Removal of native vegetation, including dead vegetation	Planning Permit
Removal of non-native vegetation	Planning Permit (in ESO4, ESO5, VPO3, VPO4, VPO5, VPO6, VPO8 and VPO9)
Reduce fuel loads / address fire risk through removal of native vegetation, i.e. Thinning works, creations of fuel breaks or fire access tracks over 6m wide	Planning Permit (unless in accordance with a written agreement with DELWP)

Issues

- **Fuel loads** - Large areas of woody weeds or robust grassy weeds contribute to fuel loads
- **Fuel loads -** When chemically treated, large patches of woody weeds can create a fire risk.
- **Slashing program** – Continually slashing high conservation value roadsides trims native herbs and low shrubs and prevents them from flowering, seeding and dispersing. Ongoing slashing may drastically change the structure and composition of bushland, and if native species are damaged it is likely to favour the growth of weeds.
- **Slashing program** – If undertaken during wet conditions or with blades set too low, slashing can damage soil and vegetation layer.
- **Slashing program** - Slashing weed-infested roadsides can spread weed seed. This is particularly a problem for Nassella grasses which produce seeds that mature around late November through to December, coinciding with the high fire danger period when slashing occurs.
- **Vegetated roadsides** - Long sections of well-vegetated roadsides without fuel breaks influences the speed, intensity and spread of fire and the capacity of emergency services to control fires.
- **Vegetated roadsides** - Most Council Managed strategic firefighting roads are in forested areas and cannot be maintained to the CFA's control line standard. There is currently a statewide review taking place regarding strategic firebreaks.
- **Vegetated roadsides** - Vegetation may increase fire hazard in the landscape if land adjoining the road reserve is unmanaged.
- **Safety** - Trees with unstable trunk or limb structures may fall during fires and high wind events and block road access or impact powerlines.
- **Tree management post fires** - community response suggests that either not enough is being done to ensure road safety post fire or storm, or that too many trees are removed.

Opportunities

- **Slashing program** - Appropriate timing has the potential to assist in suppressing flowering and seeding of exotic species whilst reducing biomass and favouring indigenous species.
- **Slashing program** - In areas that support significant ground flora, opportunity exists to mark or fence off areas that contain the best values which will reduce impacts to native vegetation without compromising the objective of reducing fire risk.
- **Vehicle hygiene** – Improved implementation of the vehicle hygiene manual will reduce weed spread.
- **Controlled burning** - Controlled burning could provide comprehensive fuel management consistent with the objectives of the slashing program whilst providing opportunities for recruitment of fire adapted indigenous species.
- **Ecological thinning** - selective thinning can provide ecological benefits in addition to fuel reduction outcomes. This is recommended for further investigation within areas of dense post-fire vegetation to provide a break in fuel load continuity.
- **Community education** - Ensure messaging focuses on appropriate home preparation and reduces the emphasis on roadside management.
- **Community education** – Increase the understanding of the limitations of a linear roadside reserve for fire mitigation given the broader landscape factors that influence fire behaviour.
- **Community education** – Communicate suitable access and egress options in the event of an emergency.
- **Permits and agreements** – If required, enter into a written agreement with DELWP that enables Council to remove native vegetation for fire risk management purposes without the need for a planning permit as guided by the Municipal Fire Management Plan.

Fire Risk Management - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal Actions	Community Engagement
Minimise the chance of ignitions and ensuring that fires that start on or close to the road are more likely to be contained whilst preventing negative impacts to native vegetation.	Slashing program aims to limit impacts on populations of national, state or regionally significant flora species, or where native vegetation is of high quality and/or significance include: High value roadside – Avoid or limit to 3 metre slash where necessary. Medium value roadside- Limit to a 3 metre roadside slash where necessary. Low value roadside – Slash all other roadsides in accordance with Council's Fire Management Plan*.	If required, develop an agreement with DELWP that exempts any native vegetation removal on roadsides to achieve the objectives of the Municipal Fire Management Plan or roadside specific action plans from requiring a planning permit for removal.	Update Council's internal mapping system (Intramaps) to include maps of: - Council's strategic fire management roads - Roadside conservation value - High conservation value grasslands - Known locations of EPBC and FFG listed species Ensure the Municipal Fire Management Plan is developed in consultation with the Environment Unit. Develop roadside action plans for: 1. High and medium conservation value grasslands that addresses the timing of slashing, ecological burns and threatened species monitoring. 2. Strategic fire management roadsides with forest or woodland vegetation that addresses fuel reduction, access for firefighting, ecological management and road safety. Internal training of staff on biodiversity and flora identification and minimising environmental impacts of roadside works	Upload maps of Council's strategic fire management roads to Council's external mapping system (Pozimaps). Prepare communications about: - Council's slashing program and its rationale. - Vegetation types and fire risk - Council's Environmental Activity on Roadside approval process Continue education on safe fire plans reiterating that fire prevention works around house is the important action residents can take and leaving early is the safest option on high fire risk days. Continue to issue Fire Prevention Notices to private properties that present a fire risk. Consult with relevant community groups, residents and the CFA in the development of specific roadside action plans.

Objective	Guiding Principles	Regulatory Response	Internal Actions	Community Engagement
Prevent the spread of weed seed by slashing contractors	Contractors to work within Council's control areas for Chilean and Texan Needle Grass and Serrated Tussock and / or brush down before moving from an infested area to a non-infested area. Slashing of Serrated Tussock and Chilean Needle Grass infested roadsides occurs after treatment.	N/A	Upload maps of Nasalla infested areas to Council's internal mapping system (Intramaps) and update the maps as new infestations are found. Emergency Management Unit to liaise with the Environment Unit prior to slashing roadsides with mapped infestations. Include vehicle hygiene processes and procedures in Council's slashing contract. Ensure brush-down locations are signposted and regularly treated with herbicide to prevent the spread of weed seed. Review Council's Vehicle Hygiene Manual, incorporate main principles into 'ute guide', and consider turning it into an adopted policy Brief Council's slashing contractors annually about Council's vehicle hygiene manual and protocols. Ensure slashing program is carefully timed to allow for treatment of Nasalla species, suppressing flowering and seeding of exotic species, reducing biomass and favouring indigenous species.	Upload maps of Nasalla infested areas to Council's internal and external mapping systems (Pozimaps) and update the maps as new infestations are found.

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15.2. Roadside burning

Burning practices can be for cultural, ecological or fuel reduction purposes, or a combination of all three. According to the CFA Roadsides Fire Management Guidelines, fuel reduction burning should be carried out in accordance with ecological principles. In general terms, this involves burning vegetation in small patches, or mosaics, roughly every five years.

Current activities

- **Register -** Roadside burns can be registered with DELWPs Joint Fuel Management Program for fuel reduction burns which will enable them to be delivered by the CFA or DELWP.
- **Roadside burns** – In recent years, roadside burns have been conducted on Websters Road and Heaths Lane in partnership with the CFA.

Issues

- **Resources** - Burning requires dedicated resources to undertake the required planning, public notification and collaboration with relevant stakeholders.
- **Environmental impact** - Burning at frequent intervals, high intensities or at the wrong time of year can negatively impact biodiversity and wildlife.
- **Impact of burns** - There is a limitation to the scale and success of burns required to control fire risk.

Opportunities

- **Environmental impact** - Burning of vegetation can have beneficial environmental and fuel reduction outcomes, reducing biomass, stimulating native seed growth and providing the conditions for effective follow up weed control.
- **Monitoring** – Regular flora and fauna monitoring will help evaluate the environmental benefits of roadside burns conducted for environmental or fuel reduction purposes
- **Training** - Small burns can contribute to CFA brigade training, if undertaken by or in partnership with brigades.
- **Traditional Owners** - Planned burns can contribute to a Traditional Owner group's connection to country, if undertaken by Traditional Owner natural resource management teams.
- **Policy** - Finalise Council's Burn Policy which outlines Council's process for implementing planned burns on Council managed land.

Roadside Burning - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal Actions	Community Engagement
Utilise fire as a management tool where it can achieve fuel reduction and ecological benefits.	Only use fire as a management tool where it will result in ecological benefits.	Ensure Traditional Owner groups are notified of roadside burns in accordance with relevant Land Use Activity Agreements.	Develop a cultural and ecological burn program for Council managed roadsides. Prepare Burn Plans for the roadsides identified in Appendix 4. Utilise Council's Burn Policy when implementing planned burns on roadsides Conduct pre and post burn flora and / or fauna monitoring	Prepare communications about ecological burns, highlighting the environmental and fuel reduction benefits if undertaken appropriately. Ensure CFA, nearby landowners and residents are informed about proposed ecological roadside burns as appropriate.

16. Road Maintenance

16.1. Road Maintenance Envelope

Current activities

- **Road maintenance envelope -** Council is required to maintain the road maintenance envelope as outlined in Road Management Plan.
- **Annual assessments -** Council undertakes annual assessments for encroachment of vegetation into the road maintenance envelope on Category 1 and 2 roads.
- **Annual maintenance program –** Based on the annual inspections, clearance or lopping of vegetation within the road maintenance envelope is required to enable the safe passage of vehicles and maintain sight lines.
- **Regulation -** All pruning or removal that are permitted must be accordance with Australian Standard 4373 and Council's Tree Management Policy 2019.
- **Reactive vegetation management** - this occurs when encroachment is identified by Council staff or the community and immediate response is requires to maintain safety.

Issues

- **Loss of vegetation -** Many forested roadsides have native vegetation encroaching into the road maintenance envelope, including mature trees and shrubs.
- **Loss of vegetation -** Some road maintenance techniques can damage native vegetation – e.g. use of the reach mower
- **Smothering of native vegetation** - Where lopping or removal of trees is required for road safety works, this can generate more log litter than necessary or desirable for local ecosystems. Leaving branches on roadsides can create a significant fire risk and can smother native vegetation.
- **Adherence to vegetation protection laws -** Some vegetation removal may require a planning permit or compliance with the DELWP Road Safety Agreement, however this is not always clear to staff.
- **Street signs –** there is a lack of clarity about vegetation clearance around street signs.

Opportunities

- **Annual internal training for relevant staff** - Cover native vegetation planning regulations, including the application of the DELWP Road Safety Agreement.
- **Record keeping and reporting** - Record vegetation removed in accordance with the DELWP Road Safety Agreement and provide this to DELWP.
- **Proactive maintenance** - Remove of small saplings and re-growth within the maintenance envelope to avoid extensive removal of mature vegetation in the future.
- **Reactive maintenance** - Develop internal principles and checklist relating to reactive maintenance aimed at mitigating risk. This checklist could outline trigger points for removal, safety assessment processes, permit requirements and officers responsible.
- **Tree felling along roadsides** - If trees are to be removed they should be felled into the construction zone, not into undisturbed native vegetation.
- **Removing trees and limbs** - On high value conservation areas, when removing fallen trees and limbs chip smaller branches and remove debris from site and leave stump and larger logs for habitat.
- **Recycling felled material** - On medium and low conservation areas, chipping and returning to site is acceptable as long as a layer of mulch is not left on the ground/flora that will result in smothering of vegetation. Consider stockpiling allowing free firewood collection for residents.

Storm and fire recovery guidelines for roadsides

On 10 June 2021, the Macedon Ranges was impacted by a major storm resulting in tree debris covering roads and damaging powerlines across most of the shire. Efforts to clear roads took weeks and resulted in significant impacts on roadside vegetation.

The following recommendations provide a guide for future recovery works:

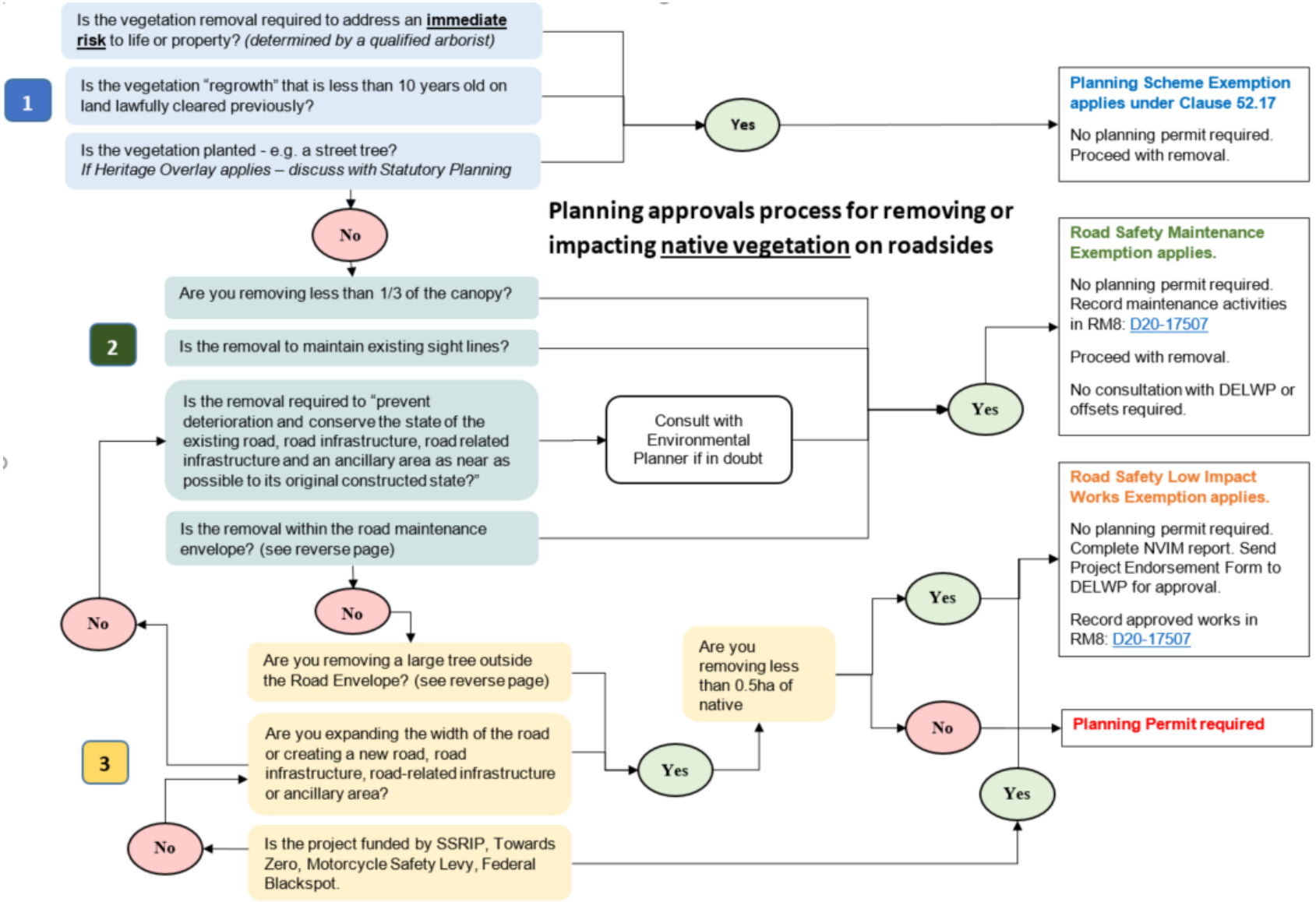
- Minimise impact of heavy vehicles on soil.
- Remove heads of fallen trees to reduce biomass.
- Continue to leave larger logs for habitat.
- Consider minimal impact methods to remove biomass on high and very high value roadsides.
- Continue to make firewood and mulch available to community members in safe locations.
- Ensure regular contractor communication and education including proper induction and work audits.
- Ensure compliance of these guidelines through regular contractor audits
- Ensure strong collaboration within council departments in response.
- Instigate follow-up restoration in areas of severe impact and monitoring for weed control where soil disturbance has occurred.

Figure 7: Ashbourne Road, Woodend, following 10 June storm event
Photo: Krista Patterson-Majoor

Maintenance Envelope - Objective, Principles and Actions

Objective	Guiding Principle	Regulatory Response	Internal protocols and actions	Community Engagement
Fulfil Council's obligations under the Road Management Plan to maintain a clear road envelope for the safe passage of vehicles and adequate sight lines for traffic while minimising ecological impacts.	When removing fallen trees and limbs, the following principles apply: High value conservation areas: chip smaller branches and remove debris from site and leave stump and larger logs for habitat. Retain stumps for habitat and left 600mm (approx.) above ground level. Stumps are only to be removed if it's a safety issue. Medium and low conservation areas: chip and return to site provided mulch does not smother native vegetation.	Council's obligations are specified in the Road Management Act and Road Management Plan. Adhere to the Road Safety Exemption agreement with DELWP which provides permit exemptions for removal of vegetation for road safety and maintenance purposes. Record vegetation loss exempted under the DELWP agreement and report to DELWP. Engage with Council's Environmental Planner to ensure Council is meeting the vegetation removal guidelines. Follow the approval process for removing native vegetation on roadsides (see Figure 8).	Provide internal training on application of the DELWP Road Safety agreement – e.g. through Council's Environment Unit attending regular "toolbox" or monthly meetings with Operations staff. Expand annual road maintenance envelope inspections to meet requirements set out in the Road management Plan. Conduct proactive maintenance in response to the audit outcomes including expanding the reach mower program to remove growth of saplings growing in road verge. Ensure roadside signage is visible either by moving the sign or removing branches blocking the sign as a first preference. Any tree removal triggers the need for a permit. Develop a criteria to determine what is a "habitat tree" and the process for ongoing maintenance when tree removal is deemed necessary.	Provide information to local landholders, Landcare and Friends groups explaining the need to clear of saplings and regrowth within the road maintenance envelope.

Figure 8: Internal Council planning approvals process for removing or impacting native vegetation on roadsides
Note that this process applies to Council operations. Residents must contact Council if they wish to remove native vegetation within a roadside.



16.2. Road widening and reconstruction

Current activities

- **Road Management Plan** - Road reconstructions and the development of new roads have set specifications and practices that must be met by council. Widths can vary from 4 to 8m depending on the volume of traffic and category of road.
- **Road Inspection Template** - Operations use a Road Inspection Template to help determine future works
- **Job Sheets** – These detail the specific road works to be undertaken.
- **Native vegetation removal -** In accordance with the Memorandum of Understanding for Road Safety Exemption, the Planning Compliance Officer applies for exemption permits for roadworks and any permitted losses are recorded.

Issues

- **Grading -** Grading is considered by some residents to be too narrow or too wide.
- **Native vegetation removal** - Some past road maintenance and widening works have resulted in unauthorised vegetation removal.
- **Stock piles** - In high value areas, discarded materials or soil stock piles can smother native vegetation and cause erosion or weed invasion
- **Guardrails** - Trees close to guardrails may affect the rail's stability in the future requiring vegetation removal in the future.
- **Vehicles on roadsides** - Parking, turning and manoeuvring of vehicles can damage roadside vegetation.

Opportunities

- **Road Inspection Template** - Update Council's Road Inspection Template used by Operations to include the conservation value of roadsides.
- **Job Sheets** - List the roadside conservation value on the corresponding job sheet to ensure crews are aware of the environmental sensitivity of the site.
- **Planning projects -** Consult the Environment Unit on future works plans to check overlays, permit and inspection requirements. Undertake a "pre design vegetation inspection tour" to ensure potential native vegetation losses can be identified and if possible avoided.
- **Budgets -** Ensure the costs of necessary consultant reports and vegetation removal offsets are accounted for in road project budgets.
- **Permits -** Ensure all vegetation removal exempted under the Road Safety Exemption is recorded.
- **Identification -** Identify all high value roadsides through guidepost stickers so crews are aware of the values when they are working out on site.
- **On-site protection -** On site, utilise maker tape to highlight 'no go zones' around high value vegetation and tree protection zones. Identify appropriate areas with low conservation value and outside of the drip line of roadside vegetation for parking or manoeuvring vehicles.

Road widening and reconstruction - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal protocols and actions	Community Engagement
Fulfil Council's obligations under the Road Management Act to allow for the safe passage of vehicles while minimising ecological impacts of road widening and reconstructions.	Minimise vegetation damage through actions such as limiting road widening in high value roadsides, and utilising existing turn-around locations.	Consult the Environment Unit on future works plans to check overlays, permit and inspection requirements. Undertake a "pre design vegetation inspection tour" to ensure potential native vegetation losses can be identified and if possible avoided. Ensure implementation of the Planning Scheme and the DELWP Road Safety Agreement. Ensure all vegetation removal exempted under the Road Safety Exemption is recorded. Ensure the cost of necessary consultant reports and native vegetation removal offsets are accounted for in road project budgets. Ensure external contractors or internal staff who are undertaking construction works protect native vegetation in accordance with the guidelines outlined in the consultant report or relevant permit condition	Update Council's Road Inspection Template used by Operations to include the conservation value of roadsides. List the roadside conservation value on the job sheets to ensure crews are aware of the environmental sensitivity of the site. Undertake detailed flora surveys prior to any road widening or reconstruction occurring on high and medium value roadsides. Identify all medium and high value roadsides through guidepost stickers so crews are aware of the values when they are working out on site. On site, utilise maker tape to highlight 'no go zones' around high value vegetation and tree protection zones. Adhere to vehicle hygiene manual to reduce weed spread.	Notify adjoining residents about road widenings and reconstruction projects, including likely impacts to roadside vegetation, as per Council's Consultation and Engagement Framework.

16.3. Drainage works and drain maintenance

Current activities

- **Assessment -** Annual assessments and clearance of culverts
- **Maintenance -** Maintenance of table drains and mitre drains to remove water off the road formation.

Issues

- **Mitre drains -** Planned and reactive drainage works can result in the removal or damage to native vegetation, including through the installation and maintenance of mitre drains.
- **Mitre drains -** Mitre drains can change existing hydrological regimes, resulting in weed invasion and tree or shrub death
- **Spraying -** Spraying open drains with herbicide can result in negative environmental impacts including erosion, contamination of waterways and destruction of native understorey.
- **Spoils -** Spoils, debris and sediment from drainage works often damages or smothers native understorey species and can increase fire risk (piles of bark etc).
- **Vehicles on roadsides -** Machinery parking or manoeuvring on roadsides can damage or remove native understory and spread invasive weeds and pathogens.
- **Trees in drains -** Trees growing in culverts and drainage lines can impact the drainage of the road, but are also at risk of root damage resulting from drain maintenance works.
- **Re-active maintenance -** Reactive processes for drain maintenance does not enable sufficient time to assess and mitigate impacts on native vegetation.
- **Drainage channels -** Significant damage to high value roadside vegetation can occur when reforming drainage channels

Opportunities

- **Pro-active management** - Work towards a pro-active drainage inspection and maintenance program that identifies conservation values and other environmental values (e.g. large trees) as part of the assessment program.
- **Diversion drains** - avoid damage to roots, bark and limbs through working outside the drip line of trees.
- **Reduce impacts** - medium to high value roadsides, reduce impacts from works through;
    - Working within the road maintenance envelope only
    - Re-using the same mitre drains and maintaining them
    - Removing spoils off-site to designated dump sites
    - Designate work zones that identify low conservation areas for vehicle parking and manoeuvring and mark ‘no go’ areas of high-value vegetation.
    - Seek approval for new diversion drains from Council’s Environment Department.
- **Reach mover program -** Implement an annual reach mower program that addresses the issue of vegetation establishing in drainage lines and reduces spraying open drains.
- **Communication** - Ensure local residents are advised of significant works in advance, so the opportunity is available to comment.
- **Stormwater management** - Where possible and appropriate, identify alternative means to stormwater management such as using semi-aquatic indigenous vegetation in some locations to slow water flow, reduce erosion and prevent sediment entering streams.

Drainage works and maintenance - Objectives, Principles and Actions

Objective	Guiding Principles	Internal protocols and actions	Community Engagement
Ensure drains operate effectively to maintain road safety while minimising ecological impacts	For high and medium conservation value roadsides: • Work within the road maintenance envelope only • Re-use the same mitre drains and maintain them • Remove spoils off-site to designated dump sites • Designate work zones that identify low conservation areas for vehicle parking and manoeuvring and mark 'no go' areas of high-value vegetation.	As part of the annual drainage assessment program record the conservation value of the roadside and other important natural values (eg. large trees or native grasses). In turn, list these values in the internal work orders. Reduce spraying open drains with herbicide and expand the annual reach mower program that will address the issue of vegetation establishing in drainage lines. Seek approval for new diversion drains from Council's Environment Department in medium and high value roadsides. Where possible and appropriate, identify alternative means to stormwater management such as using semi-aquatic indigenous vegetation in some locations. Provide mapping, training, guidepost markers and ute guide to help crews identify all medium and high value roadsides. Adhere to Council's vehicle hygiene manual to reduce weed spread.	Ensure local residents are notified of significant works in advance so the opportunity is available to comment, as per Council's Consultation and Engagement Framework.

16.4. Stock and spoil piles

Current activities

- **Roadside works** – Road maintenance and construction activities typically result in the need to manage large quantities of stock, spoils, debris and sediment.
- **Spoil sites -** Debarking rural roadsides and clearing drainage lines can create a huge amount of debris that needs to be dealt with. Depending on resources available, these spoils are either taken to multiple designated locations throughout the shire or left on the roadside.

Issues

- **Smothering native vegetation -** Stock, spoils, debris and sediment left on roadsides can damage or smother native understorey and increase fire risk (piles of bark etc).
- **Maintaining spoil sites -** Spoil sites have on-going maintenance issues such as pest plants and animals.
- **Contaminated soil** - Roadside soil contains large amounts of weed seed, engine oil and other unwanted material.
- **Spreading weeds** - Moving debris from roadsides can spread weeds.

Opportunities

- **Spoils** - In medium and high conservation areas, spoils from roadworks should be removed from site and not dumped onto native vegetation. In low conservation areas, spoils can be spread or stored on roadside.
- **Transporting spoils** - If resources allow, allocate the removal of spoils to a designated Operations team who can operate in conjunction with the road crews.
- **Stockpile sites -** Stockpile sites should be located in areas of low conservation value and beyond the drip line of trees to avoid root compaction.
- **Spoil sites -** Conduct annual maintenance of spoil sites – e.g. spray weeds once or twice a year.
- **Restoration of disused sites -** Implement a weed control and revegetation program for disused stock pile and spoil sites. Restore disused sites, establishing a series of habitat patches across the landscape.
- **Identification of sites** – Identify designated locations for stockpiles and spoil sites and display these on internal mapping. Update Councils internal mapping and utilise marker guide posts to identify dedicated stock and spoil sites.
- **Vehicle hygiene** - Adhere to vehicle hygiene manual to reduce weed spread.

Stock and spoil piles - Objectives, Principles and Actions

Objective	Guiding Principles	Internal protocols and actions	Community Engagement
Reduce the impact of roadworks on roadsides by maintaining a limited number of spoil and stock pile sites across the Shire.	On medium and high value conservation roadsides, remove spoils and relocate to designated sites. Locate stock and spoil pile sites in areas of low conservation value.	Identify designated locations for stockpiles – show on intramaps Annual maintenance program for stock and spoil piles – weeds to be treated two times per year. Adhere to Council's Vehicle Hygiene Manual Implement a restoration program including weed control and revegetation program for disused sites. If resources allow, have an operations team who is dedicated to the removal of spoils and can operate in conjunction with the road crews. Utilise marker guide posts to identify medium to high value conservation areas and dedicated stock and spoil sites.	Consider engaging local Landcare groups or school in the planting and enhancement of old spoil sites.

16.5. Fallen trees

Current activities

- **Re-active responses -** Council's arborist team responds to customer requests as they arise.

Issues

- **Uncertainty about responsibility -** Trees often fall over neighbouring fences from the road reserve. There is sometime a lack of clarity about who is responsible for the repairs.
- **Smothering of native vegetation -** Branches from fallen trees left on roadsides can smother native vegetation and create a fire risk.
- **Climate change -** With climate change creating more adverse weather and fires, fallen trees on roads and fences will become a bigger issue.

Opportunities

- **Removing debris** - When removing fallen trees and limbs in medium to high value conservation areas, chip smaller branches and remove debris from site and leave stump and larger logs for habitat.
- **Communications** – Update website to inform residents that Council is responsible for removing fallen trees to the fence-line. The landholder is responsible to remove any timber than has fallen on their land.

Fallen trees - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal protocols and actions	Community Engagement
Respond to fallen trees in a timely and considered manner, ensuring safe passage along roadsides while reducing impact on native vegetation.	When removing fallen trees and limbs, the following principles apply: High value conservation roadsides: avoid smothering native vegetation with debris through removing smaller branches and retaining stump and larger logs for habitat. Stumps should be clearly visible (left at 600cm high) and removed only if it's a safety issue. Medium and low conservation roadsides: chip and return to site provided mulch does not smother native vegetation.	Ensure compliance with Planning Scheme requirements which allows clearance of native vegetation adjoining fences "to the minimum extent necessary to enable the operation or maintenance of an existing fence".	When removing fallen trees and limbs on medium and high conservation value conservation roadsides, chip smaller branches and remove debris from site and leave stumps and larger logs for habitat in accordance with the EVC benchmarks.	Ensure information about landowner responsibility for fallen trees on their side of the fence is clearly available on Council's website.

17. Services and Utilities

Current activities

- **Vegetation management -** Vegetation around powerlines is currently managed by electricity distributers in rural areas and Council in urban areas as an important part of bushfire mitigation. Section 84 of the Electricity Safety Act 1998 specifies who is responsible for the maintenance of electric lines.
- **Regulations -** Service providers and utility companies are exempt from native vegetation removal controls under Clause 52.17 of the Planning Scheme for maintaining a utility installation, and for construction of a utility installation as long as they comply with the appropriate code of practice approved by the Secretary of DELWP
- **Regulations -** Macedon Ranges Shire Council conforms to the Electricity Safety (Electric Line Clearance) Regulations 2015. This is the Code of Practice for Electric Line Clearance and prescribes that:
    - Councils and electrical distribution companies are exempted from requiring a permit to remove native vegetation if it is in accordance with the Code of Practice prepared under Section 65 of the State Electricity Commission Act 1958. (SPP, Clause 52.17, Exemptions).
    - The Code identifies habitat trees under the Flora and Fauna Guarantee Act 1988 with particular requirements for management.
    - Activities outside of the Code require a planning permit.
- **Regulations -** Utility providers are required to obtain consent from the coordinating road authority for works impacting on roads and provide notification of the installation on infrastructure.
- **Council's Electric Line Clearance Management Plan** – this plan details the procedures required to inspect, manage and maintain clearance of vegetation from electric lines in accordance with safety regulations, while maintaining Council's tree assets.
- **Regulations -** In addition, all pruning or removal that is permitted will be in accordance with Australian Standard 4373 and Council's Tree Management Policy 2019.

Issues

- **Impact on native vegetation** - Digging up of roadsides to install / access piping or install electrical or telecommunications can impact on native vegetation.
- **Excessive impact on native vegetation** - Severe tree pruning and unnecessary disturbance to native vegetation has occurred by Powercor in the past.

Opportunities

- **Compliance -** Council can report poor practices of contractors to Powercor and fine contractors if practices are not adhering to the Australian Standards.

Services and utilities - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal protocols and actions	Community Engagement
Ensure community safety and delivery of essential services while minimising impacts to native vegetation.	Minimise impacts on native vegetation for service installation and maintenance. Ensure contractor practices adhere to the Australian Standards.	All pruning or removal that is permitted will be in accordance with Australian Standard 4373 and Council's Tree Management Policy 2019. Council to adhere to the Electricity Safety (Electric Line Clearance) Regulations 2015. Activities outside of the Code require a planning permit	Utility providers are required to obtain consent from the coordinating road authority for works impacting on roads and provide notification of the installation of infrastructure. Ensure utility installation projects are referred to Council's Environmental Planner to confirm permit exemptions apply and to facilitate avoidance and minimisation of native vegetation removal. Report poor practices of contractors to Powercor. Fine contractors if practices are not adhering to the Australian Standards. Advocate to power companies and state and federal governments for increased undergrounding of services.	

18. Recreation

Current activities

- **Informal walking and cycling tracks -** Many of the roadsides within the shire are already being utilised for recreational activities with informal tracks common throughout more densely populated areas.
- **Horse riding -** Horse riding tracks are present in areas with a high resident horse population and surrounding equestrian centres.

Issues

- **Walking and cycling** - Worn tracks from walking and cycling can damage understorey and lead to soil compaction and erosion. Walkers and bikes can also spread weed species.
- **Horses** - unmitigated horse riding can create trails that destroy native ground flora, create soil compaction or pugging and expose areas to weed invasion.

Opportunities

- **High conservation value areas -** Discourage walking, cycling and horse riding on high conservation value roadsides.
- **High conservation value areas -** Divert horse riders away from high quality and significant areas (such as grasslands) and engage them about making efforts not to widen tracks.
- **Low / Medium Conservation Value areas -** Allow use on low value roadsides. Minimise impact of trails on medium roadsides. In order to be considered appropriate for these activities and associated infrastructure if required, the roadside would typically possess little or no indigenous ground storey vegetation likely to be impacted by a constructed path, low traffic volumes and / or generous widths providing a safer distance from vehicle traffic.
- **Community education -** Install significant roadside and interpretive signs to notify both walkers and riders about important areas and to educate the public about ways of protecting and preserving native vegetation. Develop a guide to horse trails in the shire.

Recreation - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal protocols and actions	Community Engagement
Allow for walking, cycling or riding on appropriate roadsides whilst protecting high value and significant vegetation.	Recreational use should be limited on high conservation value or significant roadsides. Allow moderate use on low-medium value roadsides.		Divert horse riders away from high quality and significant areas (such as grasslands) and engage them about making efforts not to widen tracks. Work with Tourism to develop a Horse Trail Guide to identify appropriate trails in the shire, including along specified roadsides.	In high use areas, install significant roadside and interpretive signs to notify both walkers and riders about important areas and to educate the public about ways of protecting and preserving native vegetation.

19. Adjoining landholders, permits and licenses

19.1. Mowing and vegetation management by land owners

Current Activities

- **Permits -** Community members and groups apply for a Environmental Activity on Roadsides permit to undertake any works on roadsides
- **Regulation -** Burn piles or creating fires on roadsides without a permit is not allowed under clause 32 of Local Law No. 10.
- **Funding** - Council grants are available for Landcare groups to undertake weed control on roadsides.

Issues

- **Community interest -** Desire from community to supplement Council's fuel reduction and roadside weed program with voluntary works.
- **Removal of logs and ground litter** – this can negatively impact the health of ecosystems. Decaying timber contributes to soil nutrients, provides habitat for native animals such as reptiles, promotes fungi and other micro-organisms that are important for soil health and which support invertebrates and other food sources for local fauna.
- **Slashing or mowing** – this activity on high conservation roadsides by land owners can prevent native seed from maturing and dispersing.
- **Personal safety** - risks associated with conducting works on a roadside, particularly on busy and / or narrow roads.
- **Impact on threatened species -** Works by land owners could negatively impact state and federally listed species and vegetation communities, resulting in breaches to the FFG and EPBC acts.
- **Lack of policy -** Council lacks a clear policy to guide its decision about whether a local laws permit should be issued for vegetation management on roadsides.
- **Lack of understanding -** Differentiating between the different requirements and expectations for nature strips in towns and rural roadsides or roadsides with native vegetation in townships.
- **Planning permits** - requirements for the removal of exotic vegetation differ in different parts of the Shire depending on what vegetation protection or environmental significance overlays apply. This is confusing for residents.
- **Other impacts from landholders** - planting of potentially invasive species, installing fencing, tree and branch removal (more than 1 meter from fence), planting of cypress pine hedges that smoother native vegetation on roadsides, weed seed from private vehicles and equipment.

Opportunities

- **Local law -** Consider reviewing Council's local law to target permit requirements to roadsides where environmental oversight is required.
- **Planning permits -** Remove unnecessary planning permit requirements for fuel reduction works that will not impact local biodiversity (eg. removal of non-native vegetation permit triggers in areas covered with a VPO and/or ESO).
- **Community education -** Improve the information available to the public about permit requirements for roadside vegetation management.
- **Policy guidelines -** Develop a policy to guide the issuing of local laws permits for environmental works on roadsides. This policy could encourage local residents to restrict roadside mowing to weedy areas, avoid negative impacts to native understorey plants resulting from high frequency mowing, and avoid potential implications under the FFG and EPBC Acts.

Mowing and vegetation management by landowners - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal protocols and actions	Community Engagement
Enable land owners to lawfully conduct fuel management on rural roadsides while maintaining biodiversity values.	High – fuel management not permitted unless required to meet EVC benchmarks for logs and leaf litter. Medium – Fuel management may be permitted if the nature of the works minimises detrimental biodiversity impacts. Low – fuel management permitted.	Enforce the Road Management Act and Council's Local Law by requiring residents to obtain an Environmental Activity on Roadside Permit. Enforce the Planning Scheme for vegetation removal proposed by land owners that triggers a planning permit. Work with DELWP to exempt removal of exotic vegetation from requiring a planning permit on roadsides where one is currently required, e.g. under some ESOs and VPOs.	Simplify the permit application system to make it more straight forward for landholders to apply. Ensure all permit applications for vegetation management on rural roadsides are referred to the Environment Unit for comment.	Update Council's "Maintain our roadsides" brochure to reflect the Roadside Vegetation Management Plan policies and to include information about Environmental Activity on Roadside Approval process. Deliver workshops, podcasts and other media about the habitat values of roadsides and the real and perceived fire risk presented by different vegetation.
Reduce illegal native vegetation removal and unauthorised works on roadsides		When vegetation removal has been undertaken without a permit, Councils compliance officer to provide a notice to comply. Issue fines if required.	Local laws address unauthorised works that don't require a planning permit	

Environmental Works on Roadsides Permit Process

The existing Environmental Works on Roadsides permit system is a process to allow and manage landholder works on roadsides. It provides the opportunity to ensure safety of residents and that works do not have an adverse impact on significant flora and fauna. This will enable Council to meet legal requirements for vegetation protection under state planning provision.

Currently works on roadsides by landholders require a permit. The application process will be simplified and will remain at no cost to landholders. The permit application process is to be managed by the Environmental Unit in partnership with Community Safety.

Table 8: Guide to allowable and not permitted activities through the Environmental Works on Roadsides Permit.

Activity	Permit information		
	High Conservation Value Roadsides	**Medium Conservation Value Roadsides**	**Low Conservation Value Roadsides**
Weed control	✓ Allowed, with specification	✓ Allowed, with specification	✓ Allowed
Revegetation	? Negotiation - Site visit required to confirm the location and species are appropriate	? Negotiation - Site visit required to confirm the location and species are appropriate	? Negotiation - Site visit required to confirm the location and species are appropriate
Slashing / mowing	X Discouraged	? Negotiation - Site visit required	✓ Allowed – no permit required under the RCMP#*
Removal of debris	? Negotiation (to EVC benchmark) - Site visit required	? Negotiation - Site visit required	✓ Allowed, with specification
Ecological burning	? Negotiation - Site visit required	? Negotiation - Site visit required	? Negotiation - Site visit required
Removal of native vegetation	X Planning permit required	X Planning permit required	X Planning permit required
Removal of fallen timber	? Negotiation (to EVC benchmark) - Site visit required	? Negotiation - Site visit required	? Negotiation
Grazing	X Not permitted	? Local Laws Permit required	? Local Laws Permit required
New entrances / driveways	? Asset Protection Permit required	? Asset Protection Permit required	? Asset Protection Permit required
Firewood collection	X Not permitted	X Not permitted	X Not permitted

other approvals may be required under Council's local laws and/or the Macedon Ranges Planning Scheme.

* landholders are strongly encouraged to contact Council prior to undertaking mowing / slashing activities to ensure low conservation value status of roadside (non-native grasses) and any other land management considerations (eg. presence of high risk invasive and/or noxious weeds and associated vehicle hygiene requirements to reduce spread onto private properties).

19.2. Firewood collection

Current Activity

- **Permits -** Community members are required to apply for a Environmental Activity on Roadsides permit to undertake any works on roadsides

Issues

- **Firewood collection from roadsides -** Removal of logs and ground litter can negatively impact the health of ecosystems. This dead and decaying timber contributes to soil nutrients, provides habitat for native animals such as reptiles, promotes fungi and other micro-organisms that are important for soil health and which support invertebrates and other food sources for local fauna.
- **Safety risk -** Unregulated collection of firewood by the public can create a safety risk, particularly on narrow roads or where sight lines are limited.
- **Loss of habitat -** Hollow timber takes many years and is a limited resource for wildlife, and therefore should not be collected for firewood unless a safety risk.

Opportunities

- **Promote alternative firewood collection locations** – these areas are provided by DELWP in State Forest.
- **Enhance community awareness** – increase understanding that vegetation on roadsides is valuable and logs on roadsides presents a lower fire risk than perceived by the community. An Environmental Activity on Roadsides permit is required to undertake any works on roadsides.
- **Fire wood availability -** Where appropriate, identify and utilise suitable locations for firewood collection resulting from tree safety works.

Firewood collection - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal protocols and actions	Community Engagement
Prevent inappropriate collection of fire wood and maintain appropriate levels of log litter for habitat and environmental functions.	Generally do not allow collection of firewood unless the existing log litter exceeds that required for the site's ecosystem functions and EVC benchmark.	Enforce Council's Local Law by requiring permits for private firewood cutting and collection through the Environmental Activity on Roadsides approval process. Amend Council's Local Law to not require a permit for collection of firewood from designated piles of lawfully cut timber by Council staff or contractors.	Address firewood collection in the policy to guide decision making about applications under Council's Environmental Activity on Roadside Approval process. Refer all Local Laws permit applications for firewood collection to the Environment Unit for comment. Promote alternative firewood collection locations, such as those provided by DELWP in State Forest. Make free firewood available from tree safety works and following adverse weather events in appropriate locations for collection by local residents.	Prepare a brochure about fire wood collection that includes information about the legislative requirements relating to firewood collection as well as the ecological function of log and leaf litter. Deliver workshops about the habitat values of roadsides and the importance of fallen timber. Media and website to clearly articulate when firewood is or isn't allowed to be removed.

19.3. Other landholder roadside impacts

Issues

- **Grazing** – Legal or illegal grazing of roadsides can destroy native vegetation through tramping, soil compaction, consumption and weed spread.
- **Excavation, digging and storage of materials** - can impact on native vegetation.
- **Illegal dumping** - illegal dumping of waste and garden debris regularly occurs on roadsides. Illegal dumping can range in scale from a single bag of household rubbish to large household items such as TVs, appliances and electronic waste, furniture, mattresses, industrial wastes, construction and demolition materials, garden waste, packaging, tyres, old cars and soil. This has a detrimental impact on the environment, green waste typically contains weed seed and plant propagules (eg. bulbs, corms, and rhizome) that can propagate and spread.
- **Boundary plantings** – the planting of large non-native windbreak trees (such as cypress trees) very close to boundary fences encroach and compete with native vegetation on the roadside.

Opportunities

- **Grazing** - A general permit for grazing of livestock on Council land may be approved in certain circumstances through Local Laws. Permits should only be approved for low conservation value roadsides and must be referred to the Environment Planner for consideration.
- **Excavation, digging or temporary storage of materials** - Requires an Asset Protection Permit. Permits should only be approved for low conservation value roadsides and must be referred to the Environment Planner for consideration.
  Any damage to Council's assets are the owner's/permit holder's responsibility.
- **Illegal dumping** – Littering is illegal and offenders can be prosecuted under the Environment Protection Act 1970. Council monitors known 'hot spots' for illegal dumping and follows-up with fines where required/possible.
- **Illegal dumping** - Community members can report dumping of household rubbish to Council. Industrial scale illegal dumping to be referred to the EPA (1300 372 842).
- **Boundary plantings** – encourage use of native species for all boundary plantings through education and in land management plans which are required for planning permits.

Other landholder roadside impacts - Objectives, Principles and Actions

Objective	Guiding Principles	Regulatory Response	Internal protocols and actions	Community Engagement
Manage local resident use of roadsides ensuring minimal impact on native vegetation.	Permits for grazing should only be approved for low conservation value roadsides.	A general permit for grazing of livestock on Council land may be approved in certain circumstances under Local Laws No. 10. Excavation, digging or temporary storage of materials on a road reserves requires an Asset Protection Permit. Any damage to Council's assets are the owner's/permit holder's responsibility.	Permit applications for grazing must be referred to the Environment Planner for consideration. Asset Protection Permits should only be approved for low conservation value roadsides and must be referred to the Environment Planner for consideration. Council to monitor known 'hot spots' for illegal dumping and follow-up with fines where requires. Consider introducing physical blocks in locations where dumping regularly occurs.	Community members encouraged to report illegal dumping to the EPA (1300 372 842).

Part 3 – Implementation Plan

20. New initiatives

Many of the actions in this plan guide internal processes and approaches for various units within Council. However some actions require extra resources for their delivery. This section helps to prioritise and cost these additional actions and guide implementation. The implementation of these actions is subject to Councils annual budget processes.

Table 9: Implementation plan

Key for Resources Required

- $ <$5000
- $$ $5,000-$25,000
- $$$ $25,000-$50,000
- $$$$ $50,000-$100,000
- $$$$$ >$100,000
- Existing – Existing Resources

Project	Lead Department	Resources Required
Short term – Action in 1-2 years.		
1. Allocate a dedicated staff member in the Environment Unit to roadside management, responsible for overseeing implementation of this plan and the annual weed program.	Environment	Existing
2. EPBC Assessments of roadsides listed in Appendix 4	Environment	$$
3. Ensure that the location of EPBC and FFG Act species and vegetation communities are mapped on Council's internal mapping system, Intramaps	Environment	Existing
4. Develop an internal staff training program covering biodiversity on roadsides, threatened species and compliance and application of the DELWP Road Safety agreement.	Environment	Existing
5. Review and update the Significant Roadside Vegetation signage.	Environment	$$
6. Develop communications materials about: - 'Environmental Activity on Roadsides Permit' system - Council's slashing program and its rationale. - Vegetation and fire risk - Ecological burns, highlighting the environmental and fuel reduction benefits if undertaken appropriately - Who is responsible for fallen trees - Firewood collection, including legislative requirements as well as the ecological function of log and leaf litter.	Emergency Management/ Environment	Existing
7. Install marker pole stickers for Council Operations staff to identify high value conservation reserves. Eg. green with leaf symbol = high value conservation area = no dumping, no turning, no slashing, yellow =brush-down points, red = spoil dumping areas.	Environment	$$
8. Develop a "ute guide" for Council staff and contractors about roadside management, including a guide to the markers, key threatened species to help with identification and key internal and external contacts.	Environment	Existing
9. Update Council's internal and external mapping systems (Intramaps and Pozimaps) to include maps of:	GIS	Existing

- Council's strategic fire management roads, when these are incorporated into Council's Municipal Fire Management Plan - Roadside conservation values - High conservation value grasslands - Known locations of EPBC and FFG listed species - Nassella species infested areas		
10. Develop a written agreement with DELWP that exempts any native vegetation removal listed in Council's Fire Management Plan from requiring a planning permit.	Emergency Management/ Environment	Existing
11. Update Council's Road Inspection Templates used by Operations to include the conservation value of roadsides. In turn, include the roadside conservation value on the corresponding job sheet and works orders to ensure crews are aware of the sensitivity of the site.	Road Maintenance	Existing
12. Develop a policy to guide decision making about applications under Council's Environmental Activity on Roadside Approval process.	Environment	Existing
13. Develop an ecological and cultural burning program for roadsides.	Environment	$$
14. **Expand annual road maintenance envelope inspections to meet requirements set out in the Road management Plan.**	Tree Operations	$$$$$
15. **Develop a criteria to determine what is a "habitat tree" and the process for ongoing maintenance when tree removal is deemed necessary.**	Tree Operations	Existing
Medium term – Action in 2-3 years		
16. Review Council's Vehicle Hygiene Manual and consider turning it into an adopted policy	Environment / Operations	Existing
17. Establish a Standard Operating Procedure for drainage maintenance that includes the following for high and medium conservation value roadsides: - Working within the road maintenance envelope only - Re-using the same mitre drains and maintaining them, rather than establishing new ones. - Removing spoils off-site to designated dump sites and not dispersing them on roadsides. - Designating work zones that identify low conservation areas for vehicle parking and manoeuvring if required and also marking 'no go' areas of high-value vegetation.	Road Maintenance	Existing
18. Work with the Wildlife Network to ensure wildlife crossing 'hot spots' are sign posted.	Environment	$$
19. Resource an operations team dedicated to the removal of spoils to appropriate locations.	Road Maintenance	$$$$ (annually)
20. Work with DELWP to remove planning permit requirements for removal of exotic vegetation where this permit trigger is not required.	Environment	Existing
Long term – Action in 3+ years		
Update Council's Roadside Brochure to include information about the Environmental Activity on Roadside Approval process	Environment	$
Review Council's Weed and Pest Animal Strategy to reflect the priorities Council's Biodiversity Strategy and Roadside Conservation Management Plan. Priorities should include strategic fire management roads, medium and high conservation value roadsides, biolink areas, controlling spread	Environment	Existing

of Nassella species, previous investment and community interest.		
Implement a roadside restoration program of larger disused areas (eg. Spoil sites) creating important habitat patches across the landscape.	Road Maintenance	$$
Investigate implementation of a roadside restoration program that introduces habitat trees in biolinks and strategic habitat links as identified in the Biodiversity Strategy.	Environment	$$$$
In high use areas, install interpretive signs for walkers and cyclists about roadside vegetation values.	Environment	$$
Review the assessment process and re-assess roadside conservation significance in 10 years.	Environment	$$
Review RCMP in 10 years	Environment	$$
Staged Implementation over several years		
Community engagement activities as outlined in Section 21 below.	Environment	Existing
Develop roadside action plans for: 1. High and medium conservation value grasslands that addresses the timing of slashing, ecological burns and threatened species monitoring. 2. Strategic fire management roadsides with forest or woodland vegetation that addresses fuel reduction, access for firefighting, ecological management and road safety.	Environment	$$

21. Community engagement – annual program

The RCMP makes many recommendations for community engagement. To assist with implementation, table 10 outlines the annual activities recommended. Implementation of these activities is possible with existing Council resources.

Table 10: Community engagement – annual program

Engagement Activity	Responsible Department
Conservation	
Hold regular roadside information sessions and neighbourhood road walks in different locations covering topics such as: - Habitat values of roadsides - What's on my roadside? Native vegetation - Vegetation and fire risk - Weed identification, awareness and control	Environment
Continue Council's Community Weed Partnership Program and liaise with groups to ensure they enact measures to prevent spread of weed seed.	Environment
Engage community groups in local roadside restoration projects.	Environment
Engage community members in monitoring events and citizen science.	Environment
Media and website to clearly articulate when firewood is or isn't allowed to be removed.	Environment
Include updated roadside management brochure in new resident kits	Environment
Fire Risk Management	
CFA Fire Ready Meetings and communications about fire season planning.	Emergency Management
Issue Fire Prevention Notices to private properties that present a fire risk.	Emergency Management

Consult with relevant community groups, residents and the CFA in the development of specific roadside action plans.	Emergency Management/ Environment
Ensure CFA, nearby landowners and residents are informed about proposed ecological roadside burns as appropriate.	Emergency Management/ Environment
Road Maintenance	
Ensure local residents and Landcare groups are notified of significant works in advance, as per the Consultation and Engagement Framework. Includes: - Road widening ands and reconstruction - Significant drainage works - Significant clearing of saplings to maintain road envelope.	Road Maintenance Tree Operations

References

Draft Roadside Management Plan for the Shires of Newham & Woodend, Kyneton and Romsey, 1994
Flora Assessment of High Value Roadside Reserves in Newham, Karl Just, 2016
Gisborne Roadsides Management Plan – Part One – Policies and Guidelines, 1993
Hobbs Road, Bullengarook Management Prescriptions, DNRE, 2000
Macedon Ranges Habitat Quality and Conservation Significance, June 2004
Macedon Ranges Municipal Fire Prevention Plan 2020
Macedon Ranges Biodiversity Strategy 2018
Macedon Ranges Road Management Plan 2017
Macedon Ranges Pest Plan and Animal Plan
Three Chain Road Fire Risk Mitigation Action Plan, Ranges Environmental Consulting, 2019
Damaging Activities Threatening Significant Roadside Vegetation at Newham, Karl Just, 2016.

Appendices

Appendix 1: Acronyms

CALP Act – Catchment and Land Protection Act
CFA – Country Fire Authority
DELWP – Department of Environment, Land, Water and Planning
DEDJTR – Department of Economic Development, Jobs, Transport and Resources
EPBC Act – Environment Protection and Biodiversity Conservation Act
FAT – Fire Access Track
FFG Act – Flora and Fauna Guarantee Act
MRSC – Macedon Ranges Shire Council
NCCMA – North Central Catchment Management Authority
PPWCMA – Port Phillip and Westernport Catchment Management Authority
RCMP – Roadside Conservation Management Plan
RMP – Road Management Plan
VBA – Victorian Biodiversity Atlas
VEAC – Victorian Environment Advisory Council

Appendix 2: Detailed Methodology of the Roadside Assessment Method

Outline of the Roadside Assessment Method
The roadside assessment method has five major components:

- Identity
- Assessment
- Assets and threats
- Points of interest, and
- Species noted

This information is used to:

- Map the assessment sections
- Score the condition of roadside vegetation
- Identify other conservation values to further refine the final roadside conservation value, and
- Provide a useful management resource for Local Government and regional vegetation managers and planners.

Roadside identify

This section captures information used to delimit roadside sections. The road name, side of road being assessed and travel direction are recorded. Under the map point field a map point code is created and GPS location coordinates collected. A map point code combines the road name, location and unique number, e.g., TYSONS ROAD GOORNONG0001. Although points could be named anything, this combination is used to provide a meaningful way for the assessor to keep track of multiple points and sections. Map points are required for the start and end of every section. The information collected here is used by the mapping software to delimit roadside sections.

Roadside assessment

The roadside assessment contains condition indicator fields that must be completed for every section. These fields include disturbance, weed cover, canopy continuity, regeneration and adjoining vegetation. This information is used to indicate the condition of roadside vegetation. Other information collected here includes roadside width, unnatural regeneration, revegetation (roadside), revegetation (adjoining property), canopy overhang and wildlife corridor potential. This information is important, however, is not used to determine condition.

Attributes used to determine vegetation condition are listed below.

Disturbance

This is an assessment of the general disturbance of the section with particular reference to soil disturbances. The criteria used are; highly degraded, substantially modified, moderate disturbance and near natural. Many indigenous species such as lilies and orchids are highly intolerant of even moderate levels of soil disturbance. Although disturbance can be a precursor to regeneration and recruitment events, in the context of linear, fragmented roadside remnants through typically agricultural landscapes, exotic species are often best placed to take advantage of disturbed ground. As a result, the soil disturbance score made the biggest contribution to the site's overall conservation value.

- A section considered **near natural** would have little evidence of soil disturbance. The ground layer should reflect a minimally disturbed state. Ground flora may be reduced in diversity, but still be well represented in composition and cover. Weed cover is assessed separately, however, this can be a good indicator of soil disturbance (i.e. the type and extent of weeds

present). Understorey species (if required) should still be present in minimally viable populations, although, may be significantly reduced in abundance. Overstorey should be at least the minimal cover required, although the structure may be altered (i.e. trees may be re-growth). Near natural does not mean undisturbed or pristine, rather, that the site is as natural as likely to be seen today. Near natural should be used only for the most intact sites assessed.

- **Moderate disturbance** also has minimal soil disturbance. However, soils may exhibit some minor evidence of compaction processes, such as, light stock movement, but not other disturbances, i.e. ripping or ploughing. Other structural elements of the site will have undergone some change. For example, many trees may have been removed and are now regrowth. Shrubs may be reduced in abundance and not present in viable populations. The ground layer flora may be significantly reduced in diversity through grazing, etc. Most sections will have had moderate disturbance.

- **Substantially modified** refers to soil disturbance considered to be more than minor and up to moderate in extent and severity. Significant changes to other structural elements will be present. Moderate soil disturbances include some livestock impacts, vehicle movement, some ploughing or ripping, etc. Two structural elements may be completely missing or all are considerably altered. At least one structural element must still be present, even if significantly degraded.

- **Highly degraded** sites generally have no natural soil values remaining. Significant soil degrading processes have taken place, such as, ploughing, grading, soil removal and continued compaction or pugging from stock movement. All structural elements will generally be completely removed or all are significantly degraded.

Figure 9: Some sites may be difficult to easily place within a disturbance category. This site may have been considered near natural prior to this disturbance (raking up leaf litter and mulch). Now the site would be moderate disturbance.

Weed Cover

Weed invasion has the potential to rapidly degrade roadside remnants, and, as such, is a key indicator of conservation value of an area. All non-indigenous species were treated equally, regardless of being considered high threat or low threat, however high threat weeds were addressed in greater detail during a different part of the assessment with species information and individual cover attributes recorded.

Weed cover assessed as a percentage cover of all weed species for the entire section length. There are four categories <25%, 25% – 50%, 50% - 75% and >75% cover. The assessment is a general assessment of weed cover regardless of the type of weeds present, i.e., grassy weeds or shrubby weeds within the section. Further information regarding the species of weeds and their respective cover or extent is recorded under the species noted or point of interest fields if required.

Regeneration

The regeneration capacity of a roadside is key to the long term viability of the area, with the replacement of trees and shrubs over time critical to maintaining vegetation structure and to replacing individuals lost over time. Since regeneration is strongly correlated with disturbance, many “near natural” areas will have a low regeneration score recorded.

This component of the assessment refers to the extent of regenerating trees and/or shrubs. Grasses and other herbs are not included under regeneration. Regeneration refers to immature specimens of overstorey or understorey (shrub) species. Revegetation (planted native indigenous species) is not part of this measure, this is considered separately. The criteria used are none, slight, moderate and extensive. Unnatural regeneration is discussed under the other information section.

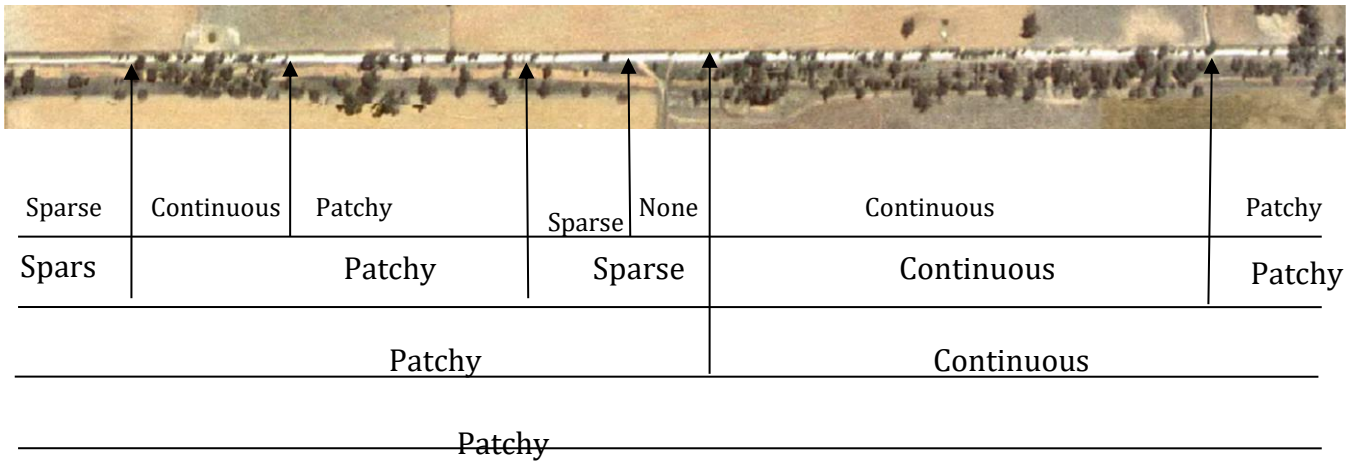
- Where **no regeneration** is observed, the criteria – none is used.
- **Slight regeneration** refers to less than 10% of the section has regenerating trees and shrubs present. They may be clumped or spread out.
- **Moderate regeneration** is up to as much as 50% of the site contains regenerating trees or shrubs. Generally this should be over the section length and not clumped.
- **Extensive regeneration** is any regenerating trees and/or shrubs that cover over 50% of the section length. This should be over the section length and not clumped.

Species diversity or regeneration health is not part of the assessment, however, may be recorded as a comment if required. Regenerating trees refers to juvenile specimens. The DELWP guidelines defines a canopy tree as a mature tree (i.e. it is able to flower) that is greater than 3 metres in height and is normally found in the upper layer of the relevant vegetation type. A juvenile specimen will therefore be less than this. Regeneration in shrubs is more variable, however, the assessment still requires juvenile specimens to be present. Attention needs to be paid to the type of species being assessed and what might be reasonably considered as regeneration. Many near natural sections will have low regeneration recorded.

Canopy Continuity

This is a key attribute used to determine the potential for the roadside to act as a wildlife corridor. This measure assesses the linear connectivity of overstorey species canopy. The criteria used are continuous (90%-100%), patchy (10% – 90%), sparse (<10%) and none (no canopy). Interpreting this measure requires the assessor to identify the most appropriate criteria to be used. Some configurations of vegetation may be ascribed to more than one criterion depending on the length of the section. In these situations the assessor needs to make a judgment as to the most effective and meaningful way to determine sections.

- Canopy is **continuous** when not spaced by more than three meters length way along the road section. Up to 10% of the section length may be areas of less connected canopy or small gaps.
- **Patchy vegetation** refers to section where the canopy is spaced by more than three metres. Lengthways gaps in the canopy can range from 4 meters up to 70 meters. Longer gaps (>70 m) should be assessed as a separate section with no canopy.
- **Sparse vegetation** is where less then 10% of the section has canopy present. The longer the section the more canopies that will be able to occur within in the section before patchy must be used. This measure refers more to isolated trees and small clumps of trees.
- Sections with no trees and hence no canopy are recorded with **none**.



In the above example the different application of canopy continuity criteria demonstrates the flexibility of these different terms. The scale at which the assessment sections are created will in part determine the final value used. In this example only the possible uses of canopy continuity are demonstrated, however, many other assessment criteria may have also determined assessment sections. The shorter more representative sections are more useful in determining condition and management opportunities. For example, the sparse and none sections recorded in the middle of the road strip would be strategic locations to replant with trees to enhance the corridor potential and increase the overall patch size of the remnant. If the strip was assessed as only patchy it would be difficult\impossible to determine this information effectively.

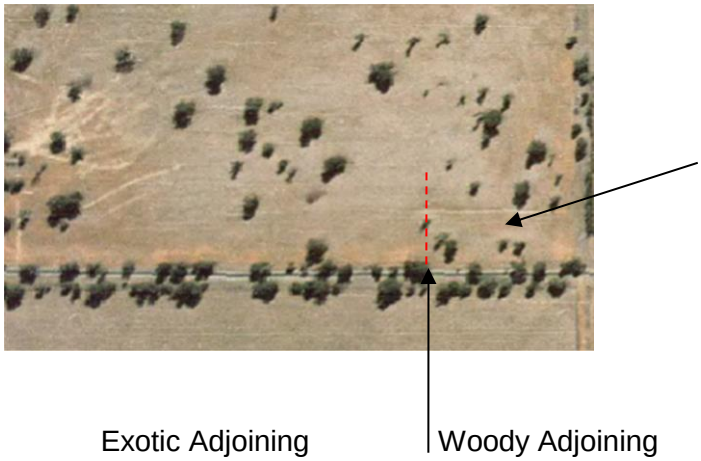
Adjoining Vegetation

This provides a general assessment of the composition of vegetation directly adjoining the roadside section. This measure has been divided into four categories, exotic herbaceous vegetation, indigenous herbaceous vegetation, indigenous vegetation including woody vegetation and non-indigenous trees. This assessment is not referring to the condition, diversity or management of the adjoining vegetation. This assessment refers to vegetation directly adjoining the roadside section. As only one value can be attributed to the section there may be times when a conflict occurs between them, e.g. a narrow strip of indigenous herbaceous vegetation adjoins the roadside and the rest of the paddock is exotic herbaceous. Many other combinations occur. The procedure, for this example, is to record it as indigenous herbaceous vegetation and make a note in the general roadside comment section that the rest of the adjoining vegetation is exotic. You may also note the width of the adjoining herbaceous section. For woody adjoining vegetation the trees and/or shrubs should be within 50 meters of the roadside. Where they are outside this they are not considered to be adjoining the assessment section. Where adjoining vegetation changes lengthways (along a road) a new section

should be created. Photos of adjoining vegetation are generally not required, however, where there are significant values this may be done, i.e. grassland, and woodland remnants.

- **Exotic herbaceous vegetation** refers to crops and improved pastures. Paddocks with a small amount of native species (grasses and/or herbs) present should be recorded as exotic.
- **Indigenous herbaceous vegetation** refers to areas that are partly or mostly comprised of native species. As the assessor will not be closely examining the adjoining vegetation other than from the roadside, key indicators are required to be identified for this measure to be reliably and rapidly applied. Native grasses are one such indicator. The presence and patterning of these need to be understood to identify if this is the correct criterion to be used. The composition of herbaceous vegetation is required to be at least 40% native species. Cover is not part of this assessment, .i.e., if adjoining vegetation is mostly native species (>40% native composition), but only 25% ground cover and 75% bare ground, the assessment is still indigenous herbaceous.
- **Indigenous vegetation** including woody vegetation refers to situations where shrubs and/or trees are also present. Some situations may be encountered where only trees occur and the associated understorey and ground layer is exotic. This is recorded as woody. Where highly scattered or isolated trees/shrubs adjoin the roadside and the ground layer is under the herbaceous vegetation threshold it should be recorded as exotic. If the assessor is of the opinion that there is a significant reason for recording it as woody (or herbaceous) they may do so, but are required to make notes.
- **Non-indigenous trees** adjoining the roadside section refers to pine plantations, blue gum timber plantations etc or inappropriate revegetation efforts. Inappropriate revegetation is any planted vegetation which does not conform to generally accepted quality standards. A guide to this is that the species used do not occur in the area or that they would not occur in that location. If more than 30% of the planting is not appropriate, it is not considered revegetation and would be recorded as non-indigenous.

In the example below, the first section has been assessed as exotic because the trees are more than fifty meters from the road. This may be indigenous herbaceous, however, in this example it has been cropped and is therefore exotic. The second section has trees closer to the road and is assessed as woody vegetation. This represents the lowest cover of trees required, if assessed as woody, where the ground layer is exotic.



Width

This is the actual width of the roadside section from the edge of the road to the fence. The edge of the road may need to be derived from the following options; the edge of the road formation, the extent of

current or historical works, from or behind the white guide posts, the outer edge of the table drain or where vegetation begins of some value that is to be included in the assessment section. Where there is no road or track the roadside width should be the center of the reserve to the fence with a note made in the roadside width notes section.

Other Information
Other criteria included under assessment are canopy overhang, unnatural regeneration, revegetation present (roadside), revegetation present (adjoining property) and wildlife corridor potential. These are not compulsory; however, they are required to be completed as observed and may determine sections.

- **Canopy overhang** refers to the presence of overstorey canopy that has grown over the road formation. The road formation has been defined through the roadside width component. Canopy overhang is considered to be present if it extends over the road formation by more than 1 meter. Canopy overhang can be used for continuous, patchy or sparse canopy continuity.
- **Unnatural regeneration** is where regeneration is present on the road formation. It may be extending from the roadside into drains or onto the road verge. Some species of Acacia and Allocasuarina form thickets of suckering regeneration after disturbance, e.g. grading, that may be considered unnatural.
- **Revegetation (roadside)**. This is present if the assessor considers that the quality of the work is sufficient to consider it revegetation. A general guide to this is if the species used are appropriate for the area and location planted. If the planting comprises more than 30% incorrect (non-indigenous) species it should not be recorded as revegetation. The threat, non-indigenous species planted, is then used to record this.
- **Revegetation (adjoining road section).** The criteria used to identify if this is present is the same as the adjoining vegetation and revegetation (roadside) sections. That is, the revegetation must be within 50 metre of the roadside and be the correct species for that location and area.
- **Wildlife corridor** potential refers to the potential of a section to be a wildlife corridor currently or in the future. For the purpose of these assessments a wildlife corridor is considered to be a link in the landscape that connects more or less isolated patches. Roadsides which travel through forest areas are not generally considered corridors. Wildlife crossings may be present but the road reserve is probably not a corridor as such. Wildlife crossings points should be recorded in the point of interest; habitat feature, section. The width of the roadside will not, at this stage, determine the potential for a wildlife corridor. The section or sections do not have to have continuous canopy. The length between remnant patches should not be more than 2 kilometers.

Roadside assets and threats

For each roadside section, assets and threats were recorded which contribute to, or detract from the roadside's conservation value. The following tables highlight some of the key assets and threats to roadsides.

Not recording any habitat assets or threats is appropriate, if there are none to be recorded. Some assets like ground flora may be present even if the section is assessed as highly degraded with more than 75% weed cover. These are generally recorded as present (if selected) or not present (not selected).

In some instances the threats identified may in fact be a management action carried out to improve the quality of roadside vegetation. For example, slashing is identified as a threatening process in areas containing indigenous vegetation, however appropriately timed slashing may in fact be assisting the maintenance of biodiversity values on roadsides with low and moderate conservation value and those

containing grasslands. Therefore, discretion was used when recording threatening processes to ensure only circumstances where the action is having a detrimental effect to the roadside vegetation was recorded. The same principle applies to fuel reduction burning which, in some circumstances, can be beneficial to grassland vegetation communities.

Table 11: Assets which contribute to a roadsides conservation value.

Asset	Example
Hollows in trees or logs	Hollows include tree hollows, basal or stump hollows and hollows in logs on the ground. Sites with high numbers of hollows were noted with a qualifier or comment.
Ground flora	Includes all grassy and herbaceous plants that are generally less than 40 centimeters in height excluding very small shrubs. Some grasses may be up to 1.5 meters in height and are also included in this asset.
Biotic soil crust	The biotic soil crust was considered present if any elements were observed. This asset refers to soil lichens and bryophytes. Often these were difficult to observe from the vehicle.
Trees	Generally a tree is any specimen over six meters in height and under the large tree benchmark for the vegetation type being assessed. Only one tree needed to be present for this asset to be recorded.
Old, large trees	Any specimen which meets or exceeds the large tree benchmark for the vegetation being assessed. The presence of extremely old specimens was noted.
Rocks	Rocks were recorded if they were observed throughout a section or in a part of it.
Leaf mulch and litter	This refers to material deposited by trees and shrubs. No minimum amount was required to consider this asset present, however, very scattered or sparse litter was generally not recorded.
Woody debris	Woody debris is large (over 10cm diameter) woody material. Present if any was observed within a section.
Wetland	Where the section forms part of a wetland this was recorded. The origin of the wetland, either naturally formed or as a result of altered hydrology was recorded. Dry wetlands were recorded as wetland. *Note: where the roadside section crosses a creek or river it was typically recorded as a wetland due to this feature not being captured in other areas of the assessment. This may be different to how this attribute was recorded during the 2006-2008 assessments.*
Cracks and crevices	Recorded if observed. Generally this asset is present in cracking clays and is evident if present.
Shrubs	Recorded if present within a section. Only a few shrubs needed to be present to record this asset. Shrubs, over large parts of the landscape, are scarce and, as such, are of high importance.
Mistletoe	Recorded if observed by the assessor. Excessive mistletoe was recorded as a threat. This is defined as when there is more mistletoe foliage than host tree foliage, or the tree is dying. Listed mistletoe (*Amyema linophylla subsp. orientalis*) was recorded as an asset.
Non-weedy site	This refers to sites with no observable weeds present at the time of the assessment.

Table 12: Threats detracting from a roadsides conservation value.

Threat	Example
Altered hydrology	Drainage of wetlands and\or the flooding of dry land
Animal pests (other than rabbits or livestock)	Hares, Indian Mynas or other feral species.

Threat	Example
Burning	Raking up leaf litter and mulch into piles, repeated or inappropriately timed burning off
Channel	Associated with irrigation water transport
Cultivation	For crops or pasture, only if sown (may be a firebreak)
Drain	Associated with water runoff management, typically involving mechanical earth works to facilitate water movement away from the road surface.
Dieback – in canopy but not dead	Refers to evidence of poor canopy health and where the tree canopy may be in decline, however not dead.
Dieback – leading to tree death	Observed canopy death, generally more than one tree suggesting external influences in canopy tree attrition.
Dumping of fill	Earth or road making materials
Erosion	Removal of soil from roadside by water or wind
Fence construction	Sections where old fences will be replaced and that activity will threaten roadside assets, i.e. many threatened species grow in or through fences. May also be used to record fence lines that have undergone recent replacement and damage has resulted. Recorded as present or future threat in comments
Fertiliser application/ nutrient run-on	Over application of super phosphate, uncontrolled run-on from intensive agricultural operations.
Firebreak construction	Ploughing or ripping. Slashing of firebreaks is covered within the Mowing/Slashing threat.
Fuel reduction burn	Evidence of intentional fuel management utilizing fire.
Gardening/horticulture	Planting and\or cultivating introduced species for show or food.
Grazing	Typically sheep, cattle, or goats.
Herbicide application	Along road verge or along channels, etc. Off target damage from weed control works onto indigenous species.
Invertebrate pests	White snails or exotic millipedes. May be recorded in conjunction with canopy dieback where the cause of the dieback can be reasonably attributed to an invertebrate species.
Livestock pugging, trampling, compaction	Including horse riding, inappropriate or repeated stock movement across or along roadsides.
Mistletoe (damaging infestation)	Criteria for excessive; there is more mistletoe foliage than host tree foliage, dead or dying trees.
Motorbikes	Evidence of track formation as a result of motorbike activity, or observing motorbikes using the road reserve.
Mowing/Slashing	When more than just the road verge for traffic\fire safety.
Non-indigenous species introduction	Planting / revegetation with non-local species.
Other Utility construction	Not power lines, pipe lines, underground cabling, drains or channels. Other utilities, i.e., Telecom or gas.
Pesticide application	Spraying for locusts or white snails.
Pipe line	Above or underground.
Power line	Power lines along the section length, but not power lines that cross the section.
Pine Plantation	Typically observed adjacent to plantations where planting or natural recruitment has resulted in encroachment on the road reserve.
Rabbit infestation	Warrens, scats present, scratching or grazing evident.
Raking	Common, relates to the stockpiling of organic matter on the roadside for the purposes of burning or removal.
Ripping	For tree lines, trenching.
Road construction/ maintenance activity	Borrowing material (soil) from roadside, spoil pushed over roadside, excessive widening or turning points.

Threat	Example
Rubbish dumping	Excessive litter, household rubbish and garden refuse dumped.
Salinity	Salt scalds and/or poor tree health or death.
Sedimentation/siltation	Deposition of soil, etc, via erosion processes.
Soil, sand, gravel or rock removal/ extraction	Builders sand (from sandy areas), volcanic rocks (from volcanic areas), derocking.
Timber removal (fallen)	Firewood collection.
Tree/shrub Lopping/ pruning/felling/removal	Clearing for large vehicle movement, power line clearing.
Underground cabling	Telecom, Gas, Power etc.
Vehicle parking /compaction / tracking	Single vehicle tracks beside main road, motorbike tracks.
Water logging (Induced)	Drain construction that leads to un-natural pooling or irrigation overflow.
Wildfire	Evidence of wildfire having impacted the area.

Assessment scores

Table 13: The values placed on attributes have been modified to account for the different structural characteristics of various vegetation types. The maximum possible score is 60.

ROADSIDE VEGETATION ASSESSMENT						
Attribute	**Assessment Criteria**	**Score**				
SOIL DISTURBANCE (20)	Highly degraded					0
	Substantially modified					3
	Moderate disturbance					10
	Near natural					20
WEED COVER (11)	>75%					0
	50-75%					1
	25-50%					4
	<25%					7
Non-weedy site	<5%					11
	EVC Groups	**Forest**	**Woodland**	**Grassland***	**Mallee**	**Shrubland***
HABITAT VALUES (10)	Biotic soil crusts	1	2	3	1	1
	Ground flora	4	4	5	4	4
	Shrubs	4	3	2	4	4
	Trees	1	1	-	1	1
REGENERATION (3)	Nil	0	0	-	0	0
	Slight	1	2	-	1	1
	Moderate	3	3	-	3	3
	Extensive	2	1	-	2	2
CANOPY CONTINUITY (4)	None 0%	0	0	-	0	2
	Sparse between 0 to 20%	1	1	-	1	2
	Patchy between 20 to 90%	2	4	-	2	4
	Continuous 90 to 100%	4	2	-	4	4
HABITAT VALUE (5)	Old, large trees	5	5	-	5	-
HABITAT VALUE (3)	Leaf mulch / litter	3	3	-	3	3
HABITAT VALUE (2)	Woody debris	2	2	-	2	2
ADJOINING VEGETATION (2)	Exotic herbaceous vegetation	1	1	1	1	1
	Herbaceous (non-woody) indigenous vegetation	1	1	2	1	1
	Woody indigenous vegetation	2	2	1	2	2
	Non-indigenous trees	1	1	1	1	1
Total Score = 60						* = Score standardized

Table 14: The Roadside Conservation Value is the outcome of combining Bioregional EVC status, vegetation condition and other values.

DETERMINING ROADSIDE CONSERVATION VALUES				
	BIODIVERSITY ATTRIBUTES			
ROADSIDE CONSERVATION VALUE (Significance)	**VEGETATION TYPES**		**Or THREATENED SPECIES (sections)**	**Or SIGNIFICANT POINTS**
	Conservation Status	Condition Range/Score		
HIGH (Very high)	Endangered	≥0.4	Roadside sections with threatened species recorded	Significant point (assume 25m buffer)
	Vulnerable	≥0.5		
	Rare	≥0.5		
(High)	Endangered	<0.4		
	Vulnerable	0.3 - <0.5		
	Rare	0.3 - <0.5		
	Depleted	≥0.5		
MEDIUM	Vulnerable	<0.3	Degraded Treeless sections with threatened species recorded	
	Rare	<0.3		
	Depleted	0.3 - <0.5		
	Least Concern	≥ 0.5		
LOW	Depleted	< 0.3		
	Least Concern	< 0.5		
(Scattered trees)	- (all)	N/A		
Degraded Treeless Vegetation	- (all)	N/A (no trees recorded)		

Appendix 3: List of high value roadsides to consider for signage

Significant Roadside signage and markers identifies areas of conservation significance and makes management actions clear.

Criteria for Significant Roadside signage placement include:

- High conservation value
- Sites where conservation values are not self-evident (eg. Grasslands).
- Roadsides over 10m wide.
- Category 1-4 roads.

The high and very high value roadsides listed below will be assessed for roadside signs and markers taking into account this criteria. It is typically only certain sections of these roads that are considered high or very high value and require signage or markers.

Note that some medium value roadsides have signage such as Mumfords and Websters which contain important grassland remnants (see special roadsides – Appendix 4).

There are currently 63 known significant vegetation roadside signs across the shire. The location of these are noted in table 15.

Table 15: List of high value roadsides to consider for significant roadside signage

Refer to table 1 for descriptions of road types.

Road Name	Road type	Locality	Conservation Score	Road Type	Existing sign?
AHERN	ROAD	WOODEND	High	5	
ALPINE	AVENUE	MACEDON	High	5	
ANNEK	LANE	BAYNTON	High	5	
ANZAC	ROAD	MOUNT MACEDON	High	5	
ASHBOURNE	ROAD	ASHBOURNE	Very High	1	
ASHWORTH	ROAD	LANCEFIELD	High	4	
BAILEY	ROAD	MACEDON	High	1	
BAMBUGA	LANE	MACEDON	Very High	nil	
BARRINGO	ROAD	MACEDON	High	5 and 1	
BAWDEN	ROAD	MACEDON	Very High	4 and 2	
BAYNTON	ROAD	LANCEFIELD	High	4 and 2	
BEATTIES	ROAD	TRENTHAM EAST	High	5	
BIRRANES	ROAD	ASHBOURNE	High	5	
BLACK HILL	ROAD	GISBORNE SOUTH	High	1	
BLACK RANGE	ROAD	ROMSEY	High	4	
BLACKHILL	ROAD	KYNETON	High	4 and 1	Yes x 1
BLACKHILL SCHOOL	ROAD	EDGECOMBE	High	5	Yes x 2
BLACKWOOD	ROAD	MACEDON	High	1	
BLACKWOOD	ROAD	BULLENGAROOK	High	4	
BOLDISONS	ROAD	WOODEND	High	4	
BOLGERS	LANE	COBAW	High	4 and 2	Yes x 2
BOUNDARY	ROAD	WOODEND	High	5	
BOUNDARY	ROAD	MOUNT MACEDON	High	5	

BOUNDARY	ROAD	PIPERS CREEK	Very High	5	Yes x 1
BOWENS	ROAD	HESKET	High	5 and FAT	Yes x 1
BRETHERTON	LANE	COBAW	High	5	
BRICK KILN	ROAD	WOODEND	High	5 and FAT	
BRIDIES	LANE	LANCEFIELD	High	5	
BRYCES	LANE	HESKET	High	3	
BUCKLEYS	ROAD	SPRINGFIELD	High	5	
BUDDS	LANE	BAYNTON	High	5	
BULLARD	ROAD	GISBORNE	Very high	5	
BURKE AND WILLS	TRACK	BENLOCH	Very high	1	Yes x 4
CAROLLS	LANE	BULLENGAROOK	Very high	5 and 3	
CEMETARY	ROAD	TYLDEN	High	5	
CENTRAL	ROAD	TYLDEN	High	1	
CHAMBERS	ROAD	ASHBOURNE	High	4	
CHEROKEE	ROAD	CHEROKEE	Very high	4	
CHRISTOPHER	CRESCENT	WOODEND	High	3	
COFFEY	ROAD	BULLENGAROOK	High	2	
COLIBAN	ROAD	SPRING HILL	High	4	
COORAMINTA	CRESCENT	NEW GISBORNE	High	3	
CROMBIE	ROAD	MACEDON	High	4	
CURRAWONG	ROAD	ASHBOURNE	High	nil	
DANIELS	ROAD	ASHBOURNE	High	5	
DARLINGTON	ROAD	BAYNTON	High	4	
DAYS	TRACK	HESKET	High	5	
DETTMANNS	LANE	KYNETON	High	3 and FAT	
DEVONSHIRE	LANE	MOUNT MACEDON	High	4	
DINEEN	ROAD	BULLENGAROOK	High	5	
DIXON	ROAD	BULLENGAROOK	High	4	
DOHERTYS	ROAD	NEWHAM	High	4	
DONALDS	ROAD	WOODEND	High	4 and 2	
DOUGLAS	ROAD	MOUNT MACEDON	High	4 and 2	
DUNNE	ROAD	BULLENGAROOK	High	5	
EATONS	ROAD	KERRIE	Very High	5	
EGANS	LANE	NEWHAM	High	2	
EINSPORNS	ROAD	ASHBOURNE	High	5	
ELLANDEE	CRESCENT	MACEDON	High	4	
EMMINS	ROAD	ASHBOURNE	High	5	
ENNIS	ROAD	EDGECOMBE	High	5	Yes x 1
FAGANS	LANE	GOLDIE	High	5 and FAT	
FALLOONS	ROAD	ASHBOURNE	High	4	
FENNEYS	LANE	BAYNTON	High	5 and 4	
FINGER POST	ROAD	WOODEND	Very High	5	
FITZGERALD	ROAD	BULLENGAROOK	High	4 and 2	
FLANAGANS	ROAD	ASHBOURNE	High	6	
FORBES	ROAD	MACEDON	High	4	
FORDES	LANE	EDGECOMBE	High	5	Yes x 1
FOREST	ROAD	NEWHAM	High	4	
FOXES	LANE	EDGECOMBE	High	5	Yes x 1

FROSTS	ROAD	BAYNTON	High	5 and FAT	
GAP	ROAD	CHEROKEE	High	4	Yes x 1
GIBBS ACCESS	ROAD	TRENTHAM EAST	Very High	5	
GISBORNE-KILMORE	ROAD	MONEGEETTA	High	RRV	
GLEN DROUITT	ROAD	MOUNT MACEDON	High	2	
GLENDEVON	DRIVE	WOODEND	High	5 and 3	
GLENLYON-SPRING HILL	ROAD	SPRING HILL	High	RRV	
GOLDIE MINE	ROAD	WILLOWMAVIN	High	nil	
GOLF HOUSE	ROAD	LANCEFIELD	High	3	
GORMAN	ROAD	BULLENGAROOK	High	3	
GOVAN	ROAD	GISBORNE	High	4	
GRADY	LANE	CHEROKEE	High	5 and FAT	
GRAHAMS	TRACK	LANCEFIELD	High	5	Yes x 1
GRAMMAR	ROAD	MACEDON	High	5	
GRANITE HILL	LANE	KYNETON	Med (High?)	5	
GREEN	AVENUE	MOUNT MACEDON	Very high	5	
GREENS	LANE	BAYNTON	High	5	
HAIRES	ROAD	BULLENGAROOK	High	4	
HALLORANS	LANE	KYNETON	High	3	
HALPERN	ROAD	WOODEND	High	5	
HAMILTON	ROAD	NEW GISBORNE	High	3	
HARDINGS	ROAD	LANCEFIELD	High	nil	
HARPERS	ROAD	ASHBOURNE	High	4 and FAT	
HASSED	ROAD	BULLENGAROOK	Very high	4	
HEATHs	LANE	CLARKEFIELD	High	5 and 4	Yes x 1
HEATHER	ROAD	GISBORNE	High	3	
HEDDLE	ROAD	LANCEFIELD	High	3	
HENNEBERGS	ROAD	COBAW	High	5 and FAT	Yes x 2
HESKET BOUNDARY	ROAD	HESKET	High	4	
HICKEYS	ROAD	TRENTHAM EAST	High	5	
HIRSTS	LANE	GOLDIE	High	5	
HOBBS	ROAD	GISBOURNE SOUTH	High	4 and 2	Yes x 6
HOCKINGS	LANE	GOLDIE	High	5	
HOGAN	COURT	KYNETON	High	3	
HONEYSUCKLE	ROAD	LAURISTON	High	2	
HYLANDS	ROAD	HESKET	High	5	
ISAAC	LANE	LAURSITON	High	Nil	
ISLAND FARM	ROAD	WOODEND	High	5 and FAT	
JACKIES	LANE	BENLOCH	High	5	
JIM	ROAD	NEWHAM	High	5 and 2	Yes x 1
JOCKS GULLY	ROAD	ASHBOURNE	Very High	5 and FAT	
JOYCES	ROAD	SPRINGFIELD	High	2	
KELLETTS	TRACK	ASHBOURNE	Very high	FAT	
KENNEDYS	LANE	BOLINDA	High	FAT	
KENT	ROAD	KERRIE	High	5 and FAT	
KERRIE	ROAD	ROMSEY	Very High	4	
KERRIE VALLEY	ROAD	KERRIE	High	1	
KEYES	ROAD	ASHBOURNE	High	5	

KING	DRIVE	LANCEFIELD	High	5	
KINSELLAS	LANE	WOODEND	High	5	
KITCHENHAMS	ROAD	BENLOCH	High	5	Yes x 1
KYNETON-BAYNTON	ROAD	KYNETON	High	1	
KYNETON-SPRINGHILL	ROAD	SPRING HILL	High	1	
LAINGS	LANE	GOLDIE	High	5	
LANCEFIELD-KILMORE	ROAD	SPRINGFIELD	High	1	RRV
LANCEFIELD-TOOBORAC	ROAD	LANCEFIELD	Very high	1	RRV
LAURISTON	ROAD	LAURISTON	Very high	1	
LAVENDER FARM	ROAD	WOODEND	High	5	
LAWSON	ROAD	MACEDON	High	4 and FAT	
LONG RYANS	ROAD	BENLOCK	High	5	
MAHONEYS	ROAD	WOODEND	High	4 and 3	
MALONES	ROAD	COBAW RANGE	High	5	
MALONEYS	LANE	LANCEFIELD	High	4	
MCBEAN	AVENUE	MACEDON	High	1	
MCEACHERN	LANE	GOLDIE	High	5	
MCGIFFORDS	ROAD	ASHBOURNE	High	5	
MCGRATHS	LANE	SPRINGFIELD	High	FAT	
MCKINLEY	TRACK	LANCEFIELD	Assessment required	5	
MCPHERSONS	LANE	KYNETON	High	5	
MILLERS	LANE	NEWHAM	High	5 and 3	
MISSION HILL	ROAD	BAYNTON	High	1	
MONTAGUE	STREET	MACEDON	High	5	
MONTAGNA	ROAD	BULLENGAROOK	High	5	
MONUMENT	ROAD	LANCEFIELD	Very High	2 and 4	
MONUMENT CREEK	ROAD	ROCHFORD	High	5	Yes x 2
MOONEYS	LANE	LANCEFIELD	High	5 and FAT	
MOUNT ELIZA	ROAD	KERRIE	High	1	
MOUNTAINS	ROAD	CHEROKEE	Very High	5	
MT CHARLIE	ROAD	CHEROKEE	Very High	5 and FAT	
MT MACEDON	ROAD	WOODEND	High	1	
MT ROBERTSON	ROAD	NEW GISBORNE	High	2	
MT ST MARYS	LANE	KYNETON	High	5 and FAT	Yes x 2
MT TENERIFFE	ROAD	RIDDELLS CREEK	High	5	
MT WILLIAM	ROAD	GOLDIE	High	4	
MULCAHY	ROAD	BULLENGAROOK	High	5	
MUSK GULLY	ROAD	LANCEFIELD	High	5	
NICHOLLS	LANE	BENLOCK	High	Nil	
NORTON	ROAD	MACEDON	High	4	Yes x 3
OAKLEYS	LANE	LANCEFIELD	High	5 and FAT	
OCONNELLS	ROAD	TRENTHAM EAST	High	4	
O'DONNELL	ROAD	TYLDEN	High	5 and FAT	
ODONNELLS	ROAD	LAURISTON	High	5	
OLD ASHBOURNE	ROAD	WOODEND	High	5	

OLD KILMORE-LANCEFIELD	ROAD	SPRINGFIELD	High	5	Yes x 2
OSULLIVANS	LANE	HESKET	High	5	
OUTAWOOD	RISE	GISBORNE	High	3	
PASCALS	LANE	ROCHFORD	Very High	5	Yes x 2
PATTERSONS	LANE	GOLDIE	High	5 and FAT	
PATTONS	ROAD	BAYNTON	High	5	
PERC BOYER'S	LANE	PASTORIA	Very high	5	
PIPERS CREEK	ROAD	KYNETON	High	1 and 4	
PORKERS	LANE	ASHBOURNE	High	5	
PORTWINES	ROAD	LAURISTON	High	5	
PREMIER MINE	ROAD	KYNETON SOUTH	High	5	
PRENDERGASTS	LANE	PASTORIA	High	5	
PYALONG	ROAD	LANCEFIELD	High	1	
RED GAP	ROAD	GOLDIE	High	4 and FAT	
ROBERTS	ROAD	WOODEND	High	3	
ROCHFORD	ROAD	LANCEFIELD	High	1	
ROMSEY	ROAD	ROMSEY	High	1	
ROYAL	PARADE	RIDDELLS CREEK	Very High	5 and FAT	
SAILISBURY	ROAD	SPRING HILL	High	5	
SANDY CREEK	ROAD	CHEROKEE	High	5 and FAT	
SANGSTERS	ROAD	MOUNT MACEDON	High	5	
SAUNDERS	ROAD	COBAW	High	5 and FAT	
SAWYERS	ROAD	WOODEND	High	5	
SCRUBBY CAMP	ROAD	BAYNTON EAST	High	nil	
SHANNONS	ROAD	MOUNT MACEDON	High	2	
SHELTONS	ROAD	NEWHAM	High	5	Yes x 4
SHEPHERDS HILL	ROAD	LAURSITON	Very High	2	
SHERWOOD	COURT	LANCEFIELD	High	5	
SHORT	ROAD	GISBORNE	High	3	
SHOWLERS	ROAD	BENLOCH	High	3	
SIMON HILL	ROAD	DARRAWEIT GUIM	High	4	
SINCLAIRS	LANE	GOLDIE	Very High	FAT	
SLATELY CREEK	ROAD	WOODEND	High	5 and FAT	
SOUTH	LANE	KYNETON	High	5 and FAT	
SPENCER	ROAD	WOODEND	Very High	3	
SPRINGFIELD	ROAD	SPRINGFIELD	High	4	
STAFFORDS	LANE	LANCEFIELD	High	4	
STRANGES	ROAD	ROMSEY	High	5	
SYD SMITHS	LANE	BENLOCK	High	5	
SYNDICATE	ROAD	MOUNT MACEDON	High	2	
TALBOT	TRACK	LANCEFIELD	High	5	
TAYLOR	ROAD	ASHBOURNE	High	5 and FAT	
THREE CHAIN	ROAD	NEWHAM	High	1	Yes x 5
TOOBORAC-BAYNTON	ROAD	BAYNTON EAST	High	nil	
TROTT	ROAD	BULLENGAROOK	High	4	
TUCKETTS	ROAD	MOUNT MACEDON	Very High	4 and 2	
TUNNEL CREEK	ROAD	CHEROKEE	High	5	

TURNER	AVENUE	MOUNT MACEDON	High	5	
VINNIECOMBES	ROAD	HESKET	High	5	
WALKERS	ROAD	WOODEND	Very High	5	
WALSH	ROAD	BULLENGAROOK	High	5	
WASHINGTON	LANE	WOODEND	Very High	4 and 3	
WATERLOO FLAT	ROAD	BULLENGAROOK	High	4 and 2	
WATERWORKS	ROAD	NEWHAM	Med - High	5	
WATTS	ROAD	MACEDON	High	5	
WEBB	ROAD	BULLENGAROOK	Very High	4	
WEST GOLDIE	ROAD	LANCEFIELD	High	4	
WESTCOTT	LANE	BENLOCH	High	5	
WHALANS	TRACK	LANCEFIELD	High	5	
WHEELRIGHTS	ROAD	RIDDELLS CREEK	High	5	
WHITE	ROAD	BULLENGAROOK	High	5	Yes x 2
WHITEBRIDGE	ROAD	ROCHFORD	High	5 and FAT	
WILLEYS	ROAD	MACEDON	High	5 and 3	
WILLIAM	ROAD	BULLENGAROOK	High	5	
WOODLAND	DRIVE	GISBORNE	High	3	
YOUNGS	ROAD	BAYNTON	High	5	
ZIG ZAG	ROAD	MOUNT MACEDON	High	5	

Appendix 4: List of 'special' roadsides

Table 16 highlights the additional roadsides that require EPBC assessment, signage, action planning for conservation and fire prevention or the introduction of the cyclic program of burning and/or slashing and resting. This was based on assessments undertaken in 2016-18. Additional roadsides may be added based on new knowledge.

Table 16: List of 'special' roadsides

Road	Locality	Rational	Recommendations
Baynton Rd	Baynton	High conservation value and high use road	Action plan for conservation and fire prevention
Burke and Wills Track	Sidonia	High conservation value and high use road	Action plan for conservation and fire prevention
Cherrington Drive	Clarkefield	High conservation value.	EPBC Assessment
Dixons Road	Gisborne	Mostly high value grassland.	Ecological burn or slashing for native grasses
Doolins Rd	Clarkefield	Medium-High, Grassland	EPBC Assessment
Flints Rd	Darraweit Guim	High	EPBC Assessment
Heaths Lane	Clarkefield	Medium-High, Grassland	EPBC Assessment. Cyclic program of burning, slashing and resting.
Hennebergs Rd	Newham	High, Scoria Cone Woodland	Scoria Cone Woodland VPO
Hillview Drive	Clarkefield	High Potential EPBC	EPBC Assessment.
Kennedys Ln	Bolinda	High	EPBC Assessment. Ecological burn
King Drive	Lancefield	Very High. Native grassland and orchid diversity. Presence of Golden Sun Moth	EPBC Assessment. Ecological Burn Signage/education to limit slashing. Grassland VPO
Lawson Rd	Macedon	High to Very high	Ecological burn for Kangaroo and Stipa Grasses
Markham Rd	Riddells Creek	Medium-High, EPBC Listed Grasslands	Change mowing regime. Signage. Grassland VPO
McIntyre Lane	Bolinda	Medium	Ecological Burn
McPhersons Lane	Kyneton	Medium	Plains Grassy Woodland VPO
Portwines Rd	Lauriston	High. Presence of Golden Sun Moth	Signage of Golden Sun Moth locations
Quayles Rd	Darraweit Guim	Medium	EPBC Assessment. Ecological Burn
Shannons Rd	Lancefield	Medium	EPBC Assessment
Sheltons Rd	Newham	High, Scoria Cone Woodland	Scoria Cone Woodland VPO
Simon Hill Rd	Darraweit Guim	High to Very High	EPBC Assessment. Weed management. Ecological Burn
Showlers Lane	Lancefield	High	Grassland VPO
Southerlands Rd	Riddells Creek	Medium-High	Plains Grassy Woodland VPO

Talbots Lane	Lancefield	Very High. High quality grassland	EPBC Assessment
Three Chain Rd	Carlsruhe	Medium-High. High quality grassland sections	Implementation of Action Plan, Grassland VPO
Websters Rd	Riddells Creek	Medium. Grassland.	Ecological Burn. Has sign.
West Goldie Rd	Lancefield	Medium - Very High	EPBC Assessment

Appendix 5: Roadside Slashing Program and Fire Access Tracks

Maps as provided in the Municipal Fire Management Plan 2020

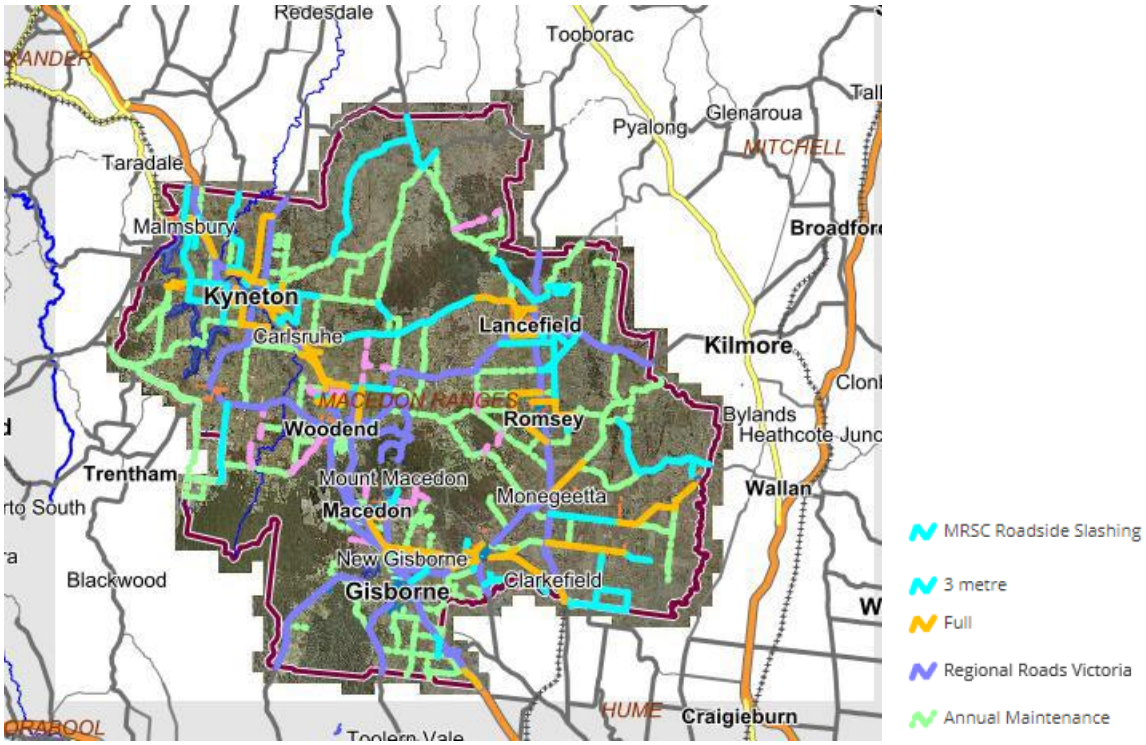


Figure 10: Municipal Roadside Slashing Program

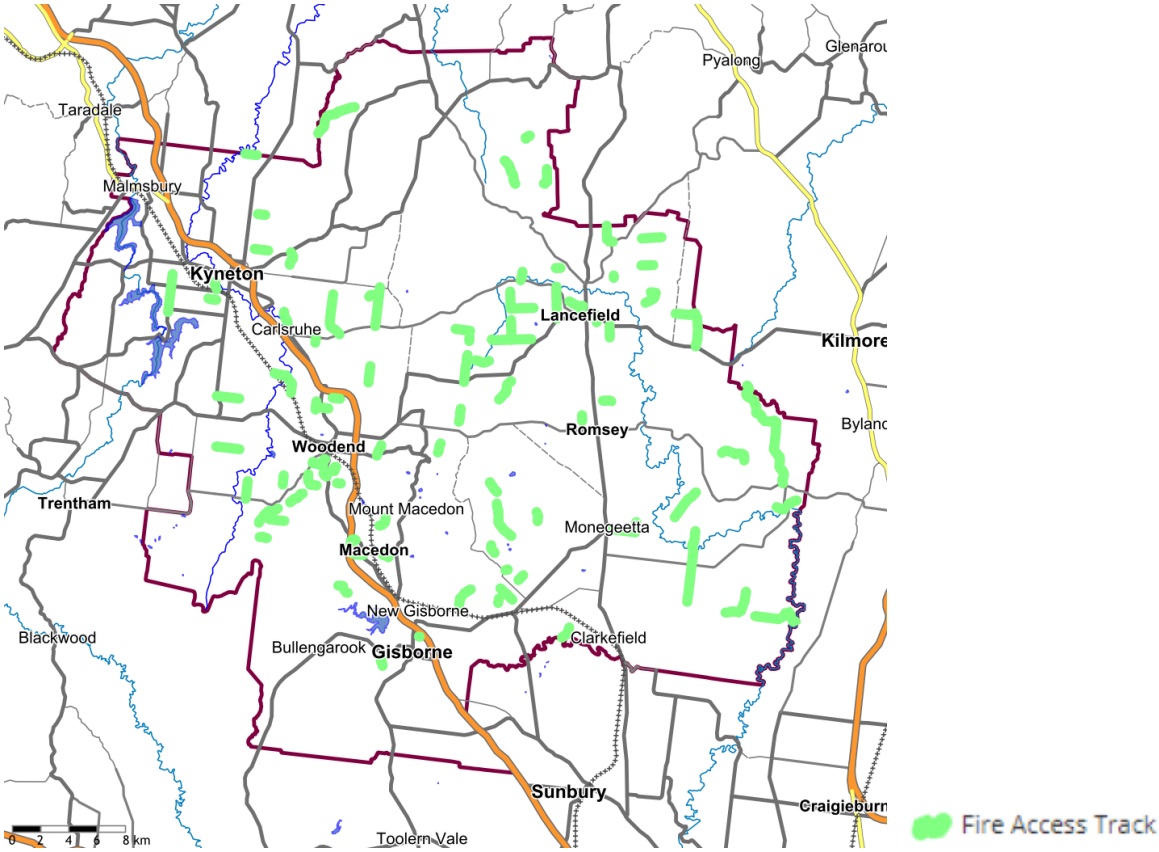


Figure 11: Fire Access Tracks

Appendix 6: MRSC Roadside Management Responsibilities

Table 17 outlines who is responsible in Council for different elements of roadside management.

Table 17: MRSC Roadside Management Responsibilities

Issue	Department	Contact
Weed control program, roadside vegetation management	Strategic Planning and Environment	Roadside Conservation Officer
Works on roadsides permits, firewood collection	Strategic Planning and Environment	Roadside Conservation Officer
Community weed partnership program	Strategic Planning and Environment	Roadside Conservation Officer
Biodiversity monitoring program	Strategic Planning and Environment	Biodiversity Projects Officer
Vegetation removal planning permits, asset protection permits	Strategic Planning and Environment	Environmental Planner
Fire prevention, fuel management	Regulatory Compliance	Fire Prevention Officer
Grazing licenses, illegal dumping,	Regulatory Compliance	Coordinator Local Laws
Planning compliance, illegal vegetation removal	Statutory Planning	Planning Compliance Officer
Maintenance of parks and gardens, township nature strips	Open space and recreation	Senior Team Leader Horticulture
Mowing	Open space and recreation	Team Leader Playground and Assets
Tree safety, street trees, powerline clearance	Open space and recreation	Senior Team Leader Tree Operations
Asset protection permits	Engineering and resource recovery	Coordinator Civil Infrastructure Construction
Drainage, road maintenance	Engineering and resource recovery	Coordinator Road Maintenance
Property boundaries	Finance and Reporting	Property Officer

Appendix 7: Maps - Vehicle Hygiene and Nassalla

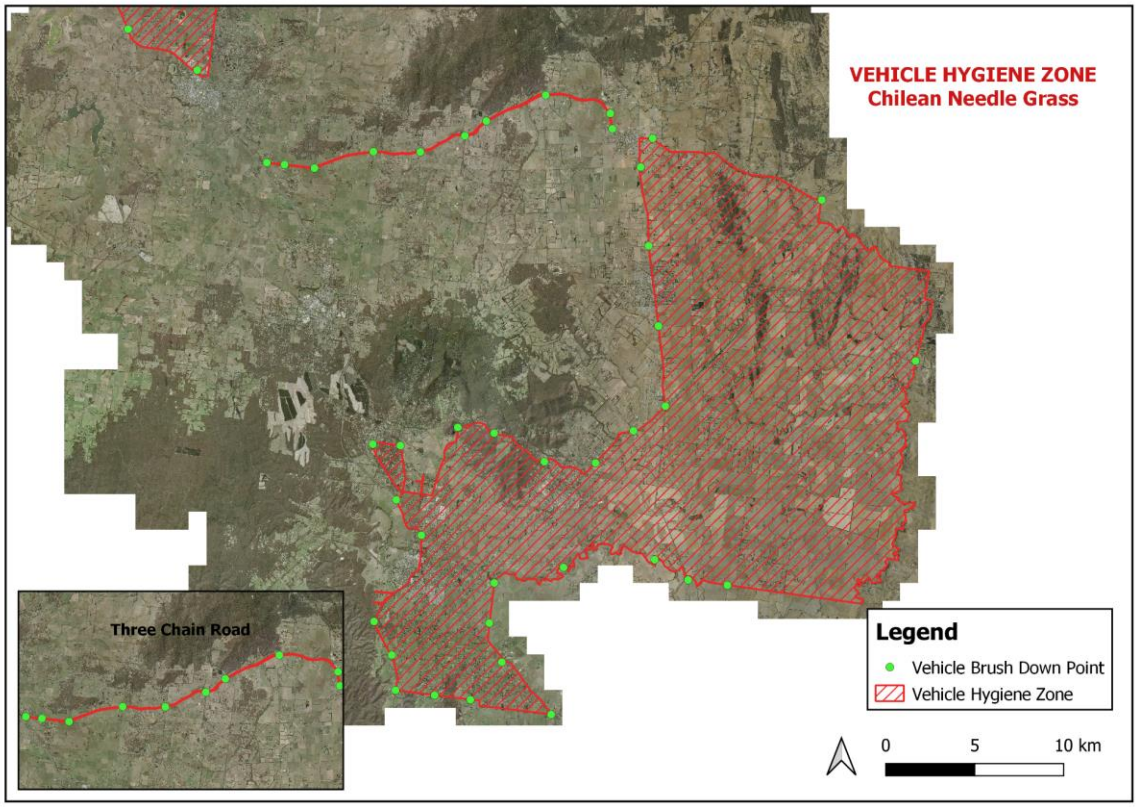


Figure 12: Vehicle Hygiene Zone for Chilean Needle Grass

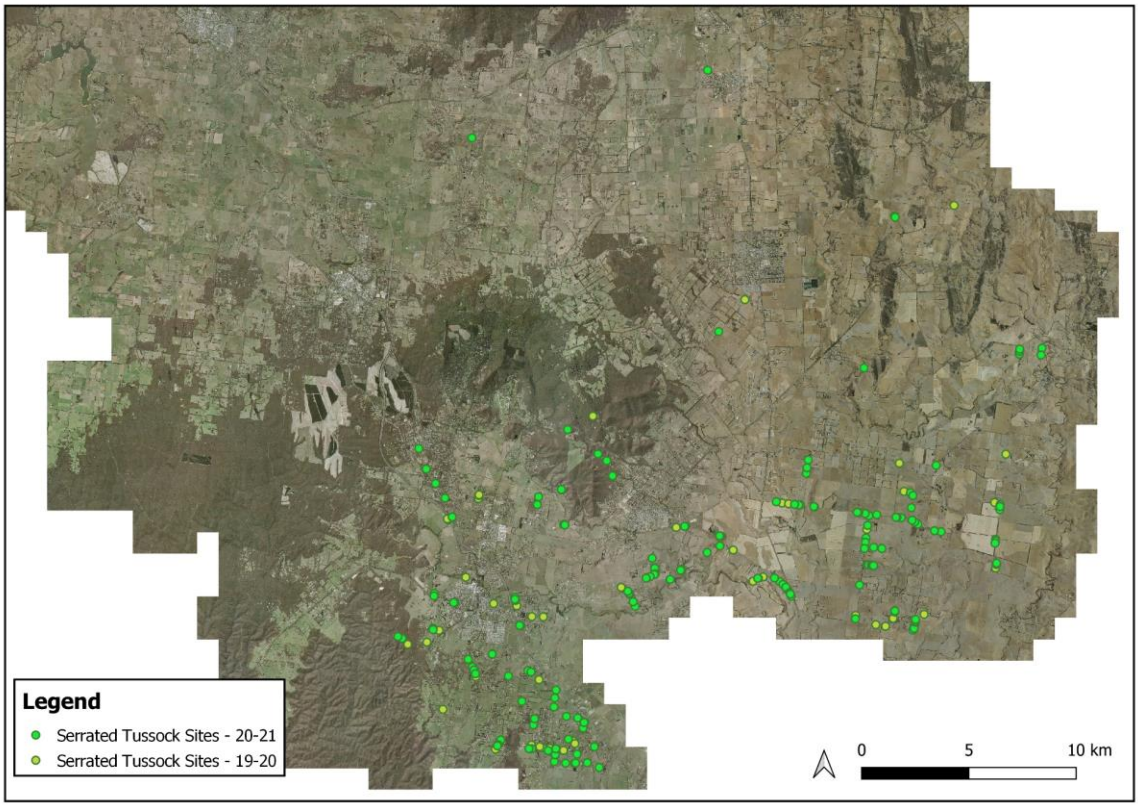


Figure 13: Known locations for Serrated Tussock

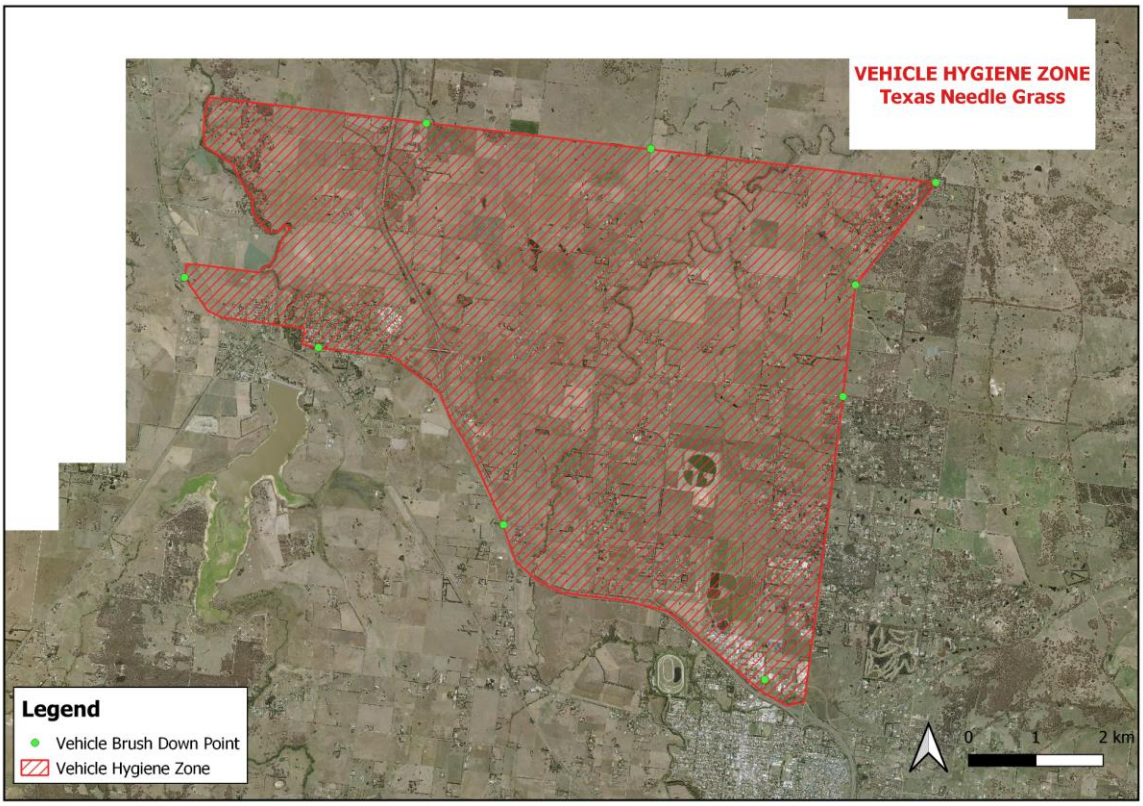


Figure 14: Vehicle Hygiene Zone for Texas Needle Grass

Appendix 8: Map - Priority biolink areas and strategic habitat links

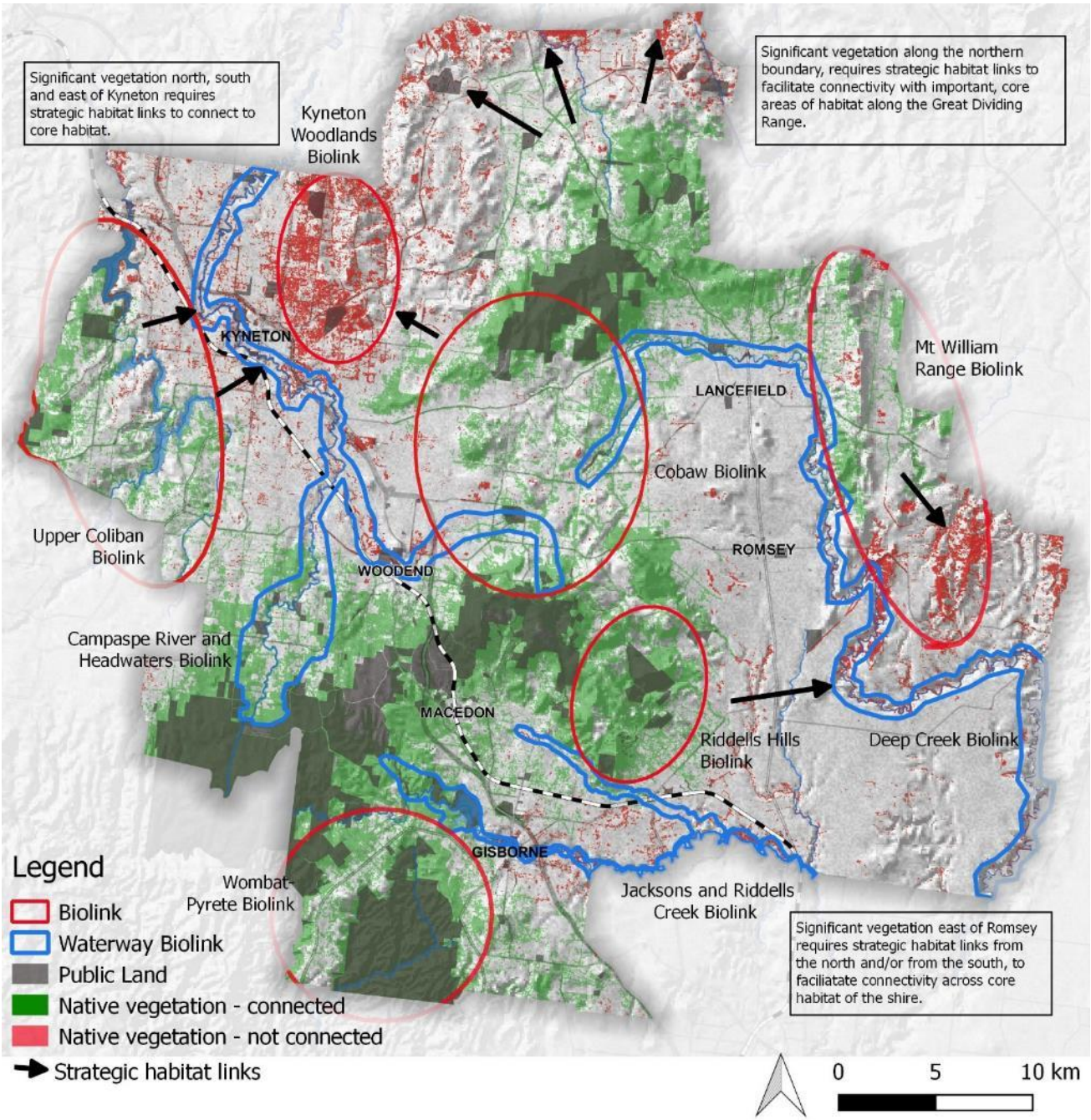


Figure 15: Priority biolink areas and strategic habitat links from 2018 Biodiversity Strategy.