

Roadside Management - A balanced approach

VicRoads' Roadside Management Strategy 2011



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Revision 0 / October 2011

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This strategy was prepared by VicRoads Network and Asset Planning.

Foreword

Roadside Management – A Balanced Approach provides clear and consistent objectives for the management of Victoria's roadside areas. It is recognised that these are complex and often conflicting. This strategy provides direction on balancing the objectives when identifying cost-effective treatments. It also recognises the importance of responding to community needs and expectations regarding roadside areas.



Gary Liddle
Chief Executive

Introduction

The roadsides of Victoria's arterial roads are estimated to cover more than 80,000 hectares. This strategy provides a balanced approach to managing the many, sometimes conflicting functions of the roadside, whilst ensuring the efficient performance of our road network.

The state's arterial roads carry freight vehicles, cars, trams, buses, motorcycles, bicycles and pedestrians, and the roadside areas need to be managed to facilitate safe and efficient transport for all of these modes of transport. It is also recognised that roadside areas can provide significant visual and functional amenity for local residents, as well as containing significant cultural and environmental areas for all Victorians. The management of vegetation in roadside areas can play a key role in minimising bushfire risk, both in the choice of species grown or retained, and in the programming of work such as grass cutting and vegetation removal.

This strategy aims to guide the management of roadsides in consultation with the local community to achieve the best balance between all of these factors

Roadside management responsibility

The Road Management Act 2004, allocates responsibility for the management and coordination of different parts of a road reserve, including the roadside.

Generally VicRoads is responsible for the management of:

- all roadsides areas on freeways (excluding toll roads);
- all roadside areas on non-urban arterial roads; and
- central medians on urban roadsides.

Councils are generally responsible for the management of urban arterial roadsides and local roads; however VicRoads and Councils may, by agreement, share or change responsibilities.

Coordination of all arterial and freeway reserves (the task of determining appropriate usage or activity) is the responsibility of VicRoads in all urban and rural areas. This responsibility includes decisions relating to new access, installation of new infrastructure and signs, off-road paths, planting of vegetation and undertaking any other activity outside the day-to-day use and management of the roadside. In urban areas, these decisions have important implications for the safe, liveable and sustainable operation of the road network.

What is a roadside?

Roadsides are the areas within the road reserve which are not used for motorised vehicle traffic, including land either side of the road and between carriageways.



Roadside management objectives

This strategy provides a framework for the balanced consideration of four key roadside management objectives. It uses an asset management approach to identify priority treatments to preserve roadside functions. Each objective relies on both input from the community and expert analysis to ensure that resources are directed to the locations where they are most required.

Priorities for roadside management depend on the location and nature of a roadside. For example an urban freeway may have a strong focus on urban and landscape design, where as a rural arterial may be important for strategic fire management or environmental protection. Regardless of the nature of the roadside, all objectives will be considered to a greater or lesser extent.

Enhance road safety and vehicle movement

The roadside may contain potential hazards that may be struck by a vehicle leaving the road or obstruct visibility of drivers within the road. Likewise, vegetation, objects or animals that come onto the road can also lead to crashes. A key objective of this strategy is to minimise the potential for roadside areas to adversely impact the safety of the roadway. This includes the need to maintain road safety infrastructure such as safety barriers to preserve its road safety function. Structural stability of the roadside areas and the road itself can be affected by ground conditions, and therefore pose a safety risk or limitations on the mass of vehicles able to use a road. Vegetation or other objects encroaching onto the roadway from roadside areas can restrict movement within a roadway, and lead to limitations on the size of vehicles able to use a road. These sites require monitoring and management. The strategy aims to manage and facilitate appropriate and safe movements to vehicles both accessing and using the road.

Protect environmental and cultural heritage values

Roadside areas vary significantly across Victoria and may contain environmentally significant vegetation, animals or functions and in some cases, important cultural sites. This strategy recognises the need to conserve native flora and fauna populations, and to protect ecosystems, biodiversity and environmental functions within roadside areas. Environmental management will also aim to protect stream water quality where appropriate. Some roadsides contain sites or artefacts with significant cultural value for either indigenous or non-indigenous communities. It is critical that these sites are protected and preserved.

Manage fire risk

In some cases, the management of roadside vegetation plays a role in Victoria's Integrated Fire Management Planning process. It is essential that roadside management complements the fire management process and responds appropriately to its requirements. This will involve a co-operative approach between Government agencies to ensure that fire management is strategic, effective and targeted.

Preserve and enhance roadside amenity

The amenity of roadside areas can be particularly important to many communities. VicRoads is committed to managing roadsides with this in mind, and will aim to provide landscaping to generate community pride. This is equally important in both urban and rural areas given the shared responsibility in urban areas; VicRoads will work with Councils to develop a more strategic approach to roadside management. It is well documented that roadsides contribute to positive travel experiences across Victoria.



Our strategy for achieving the roadside management objectives

The relative importance of each of the roadside management objectives varies according to the context of the particular roadside.

For example:

- local, regional, state or national significance of the flora and fauna
- role of the road and roadside in the local and regional Integrated Fire Management Plans
- strategic importance of the road and volume of traffic using it
- surrounding landscape and abutting land uses

There may also be a need to balance state-wide priorities for roadside management with considerations raised by the community directly affected by a particular road length. At the same time, an asset management approach must be taken to ensure that Victorians receive value for money and their long-term needs are catered for.

Strategy Components

There are three key components to this strategy to ensure that the objectives detailed above can be achieved:

1. Recognise community benefits

Roadsides on Victoria's arterial road network will be managed recognising community needs and expectations for environmental responsibility, social equity and economic efficiency, and complying with relevant State and Federal Government policy and statutes. Roadside asset management plans addressing specific management needs will be developed in consultation with affected communities and stakeholders.

2. Balanced and prioritised outcomes

Proposed treatments will be assessed against the four roadside management objectives outlined in this strategy, with priority given to cost-effective treatments that achieve their primary objective without compromising the other objectives. Proposed programs will be prioritised for funding on the basis of best practical outcomes for road safety, preservation of community assets and environmental sustainability.

3. Asset management approach

Roadsides will be managed as valuable community assets where treatments are informed by knowledge of the nature, capacity, condition and life cycle performance of the asset. Treatments must be cost-effective and their immediate and long term environmental, social and economic outcomes will be considered.



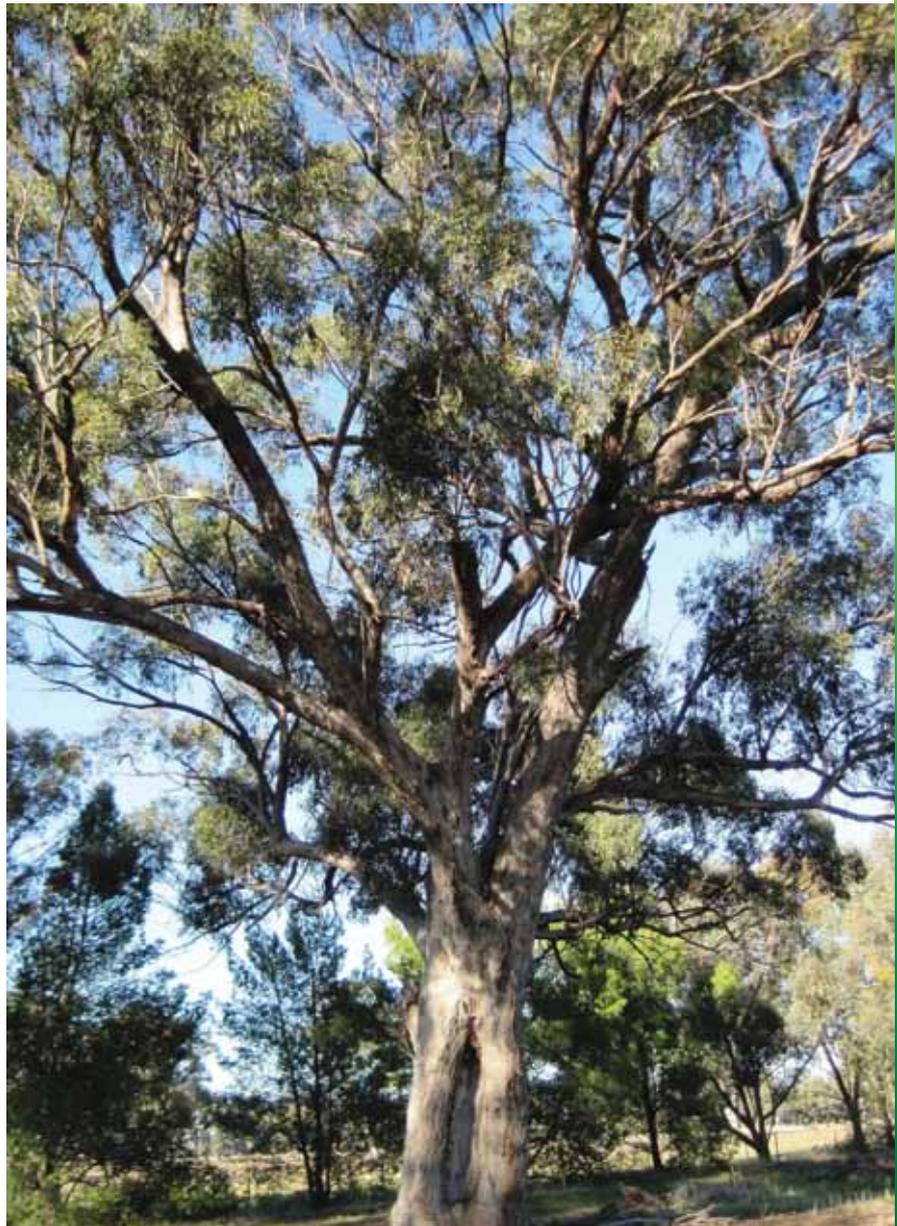
1. Recognise community benefits

Meaningful community and stakeholder engagement is fundamental to VicRoads decision making. The principles in the new Transport Integration Act 2010 (TIA) reinforce the importance of this approach. The TIA requires VicRoads to consider the interests of stakeholders (including transport system users and members of the local community), and to adopt appropriate processes for stakeholder engagement.

This strategy aims to support compliance with the TIA and improve the management of roadside areas from a community and stakeholder perspective. It is crucial for VicRoads to understand the needs and interests of stakeholders in order to make informed and thoughtful decisions, which will ensure that a balanced approach to roadside management is achieved. Whilst there may not be enough resources available to meet all of the community's expectations for roadside management, VicRoads aims to engage stakeholders in the process of prioritising competing treatments, both to generate community ownership of these decisions and as far as possible to implement programs that are best suited to each community.

Statewide needs and priorities for action on the roadside are identified using broad assessment parameters and these are also considered in a local context. Each roadside length will have different functions, priorities, values and stakeholders. Accordingly, Roadside Asset Management Plans are developed regionally in consultation with these affected parties.

Effective engagement is well planned and involves considering what is important to others before making decisions that affect them; striving to achieve the best balance for the community; and being open, respectful and professional in our communication.



2. Balanced and prioritised outcomes

Recognising multiple objectives

The development of treatment regimes in Roadside Asset Management Plans must recognise the impacts on all roadside management objectives. Initiatives to address one management objective may have adverse impacts on other competing objectives. The case studies overleaf illustrate how the objectives might interact under different management scenarios.

Identifying the most appropriate treatments

It is important that treatments be assessed for their effectiveness in addressing the primary objective (in the short and long term), whilst balancing their ill affect on other roadside management objectives.

Where a proposed treatment has an unacceptable adverse impact on another objective, consideration should be given to alternative solutions or ways to minimise that impact on the other objective. For example:

- Can the affected asset be protected from the impact?
e.g. wildlife underpass to avoid conflict with traffic.
- Can the impact be minimised by a selective treatment?
e.g. removal of ground litter and shrubbery to reduce fire risk, rather than complete clearance.
- Can the asset be relocated to avoid the impact?
e.g. relocation of endangered flora/fauna species to an offset location
- Can the (minimised) adverse impact be accepted, given the identified benefits of the proposed treatment?

Four principles for selecting roadside treatments are:

- Protect life and safety.
- Preserve high-value environmental and heritage assets.
- Select solutions which are cost-effective and sustainable, and are balanced with the achievement of other roadside objectives.
- Test the outcomes of the proposed solution against local and regional priorities expressed in the Roadside Asset Management Plan and/ or by review with community and stakeholders.



Balancing potential impacts of roadside projects

The following case studies illustrate the ways that competing objectives need to be balanced in developing treatments for roadside areas.

Case study 1: Addressing a history of run-off-road crashes

VicRoads has identified a history of run-off-road crashes on a road length and found that the most cost-effective treatment is the installation of wire rope safety barrier. The primary objective is **enhancing transport safety, efficiency and access** and the treatment must be assessed against the other three objectives:

Protect environmental and cultural heritage values: Positive impact, as this option requires less vegetation removal than alternatives such as the removal of vegetation that poses a hazard.

Management of fire risk: Wire rope safety barrier reduces access to the roadside area, making grass cutting and timber and leaf debris removal more difficult. This can increase fire risk.

Preserve and enhance roadside amenity: Reduced access for maintenance as described above can lead to a negative impact on visual amenity.

In this case, assessing the impact of the wire rope safety barrier on other objectives highlights the need for access to the roadside behind the barrier. The negative impacts could be reduced by providing access points at appropriate locations

Case Study 2: Fuel reduction burn

Once a high fire risk has been identified on a particular road length, it may be necessary to conduct a fuel reduction burn. The primary objective is **management of fire risk** and its impact on the other objectives must be assessed:

Enhancing transport safety, efficiency and access: There is the potential for road safety to be impacted during the burn as smoke can impair visibility on the road and the fire may encroach on the road.

Protect environmental and cultural heritage values: The burn would have a positive impact on this objective as biodiversity could be improved through seeds being released from native species and the reduction of weeds.

Preserve and enhance roadside amenity: Most likely to have minimal impact.

In this case, the negative impacts can be avoided by temporarily closing the road and arranging detour routes.

Case Study 3: Landscaping to enhance streetscape

VicRoads considers the aesthetic impacts of its projects and has included landscaping works in an urban road project. The primary objective is **preserving and enhancing roadside amenity** and its impacts on the other objectives are:

Enhancing transport safety, efficiency and access: Vegetation may become a hazard to traffic by encroaching onto the roadway, impairing visibility or becoming a significant hazard to vehicles that leave the road.

Management of fire risk: There will be negligible impact on fire risk, because fire is rarely carried in urban landscapes.

Protect environmental and cultural heritage values: Landscaping has a positive impact by improving the local environment and providing carbon offsets.

By selecting species carefully and considering the type and volume of traffic using the road, the risk to road safety can be minimised at the planning stage.



3. An asset management approach to roadsides

The use of an asset management approach for roadsides is a cornerstone of this roadside management strategy. This approach manages the capacity, condition, operation and use of assets throughout their life cycle, to ensure the delivery of the desired level of service and best value for money to the community. In addition, treatment and maintenance programs will be designed to manage the risks affecting the performance of roadsides and the achievement of the roadside management objectives.

Roadsides are composed of a range of asset types:

- **Environmental and Cultural Heritage assets** – e.g. flora and fauna, habitat, heritage items and places.
- **Road infrastructure assets** – e.g. signs, drains, barriers, wayside stops, toilets, pedestrian and cycle pathways, horse trails, traffic management hardware.
- **Private non-road assets** – e.g. telecommunication services, electricity lines, water and gas pipelines, municipal or private tourist signs, etc.

It is important to note that the capacity and condition of these assets can significantly change over their lifespan, due to the effects of the natural environment, their use, operation and maintenance.

Collection of data to enable better roadside management

The asset management approach is most effective when derived using high-quality data. Whilst VicRoads has a well-established Road Asset System (RAS) database that captures, analyses and stores inventory and condition data for roads and bridges, there is currently no such database for roadside assets.

Due to the complexity of roadside assets, a complete and detailed inventory would be expensive to establish. However, the collection of roadside data is justified where the data is a valuable tool for the effective management and allocation of resources. Accordingly, it is considered appropriate for VicRoads to establish the capacity to access and display roadside inventory and condition data. This can be done by using a combination of existing VicRoads data and external data sources – for example, data on land use, roadside vegetation and fire risk are currently held and mapped by State and Commonwealth Government departments and agencies. Service providers who hold details of the nature and location of utility assets in road reserves and road asset, traffic and road crash data are held by VicRoads.

In addition, VicRoads will conduct an assessment of the arterial road network to capture an understanding of roadside management needs across the entire network. This will enable VicRoads to assess the nature and value of roadside vegetation, environmental values, fire risk and road safety. This will initially provide a basis for setting state-wide priorities for the development of Roadside Asset Management Plans.

Priority areas for treatment can be identified at a strategic statewide level by considering the statewide distribution of data. Areas needing more complex management (e.g. locations of high environmental or cultural heritage value, roads with high run-off-road crash rates, locations of high fire risk, or roadsides with high landscape value on approaches to towns) can be identified, and detailed investigations can be carried out to identify the most appropriate treatments in local and regional context.

The way forward

VicRoads is currently implementing actions to achieve the objectives of this strategy. This will include a regular review process to ensure that VicRoads is able to meet the community's needs and manage Victoria's roadside assets into the future.



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