



Applying roadside conservation values

Healthy, intact vegetation on roadsides is incredibly valuable for a number of reasons, including:

- **habitat for native plants and animals – old trees with hollows are particularly valuable and are disappearing from many WA landscapes**
- **refuge for threatened species in highly cleared landscapes**
- **corridors linking larger areas of vegetation, extending the habitat animals can access**
- **landcare benefits such as shelter for adjacent stock, lowering of saline water table and protection from erosion**
- **weed suppression**
- **easily seen wildflowers that draw tourism**
- **aesthetics and sense of place.**

However, the long, thin shape of roadside vegetation means that it is vulnerable to impacts from adjacent land uses. Disturbance caused by roadworks and fire can contribute to the invasion of grassy weeds that make the roadside more prone to bushfire. Clearing of adjacent land for farmland or infrastructure exposes the vegetation to stronger winds and higher, sometimes saline, water tables.

Identifying areas of different conservation value gives road managers important information to help make planning decisions, enable staff to prioritise areas needing extra care and attention during roadwork operations, identify strategic sites for rehabilitation, and more. The Roadside Conservation Committee offers a free service to map the conservation value of roadsides. This Verge Note contains information on that service and outlines its benefits.



An example of a high conservation value roadside in the State's Wheatbelt. Photo – Kylie Payne

Roadside conservation value (RCV) mapping

The Roadside Conservation Committee (RCC) can map the conservation value of roadside vegetation, at the request of local governments.

The process involves extensive on-site roadside surveys within a shire to collect data using mobile devices. This data is used to produce a GIS-based map, which is provided to the shire with a report detailing and interpreting results.

Data collected includes an indication of the roadside vegetation's:

- structure (presence of trees, shrubs, ground cover)
- diversity (number of different native plant species present)
- extent (continuous or patchy)
- habitat/corridor value (presence of features commonly used by native animals)
- weed invasion
- distribution and abundance of several shire-nominated weeds.

Based on this information, each section of road surveyed is assigned a score from 0–12 to indicate the biodiversity conservation value the roadside vegetation demonstrates. These are displayed on a map as areas of high, medium-high, medium-low and low conservation value.

The RCC offers the mapping service to shires free of charge, relying on local volunteers to undertake the survey component. At least 80 per cent of the shire-managed roads need to be surveyed to ensure that the results are useful for management. Many shires contribute staff time to coordinate volunteer surveys, or even undertake some of the survey component. Some shires obtain external funding to employ people to complete surveys.

Conservation value	Score	Typical features
High	9–12	A wide range of native trees, shrubs and ground covers present; continuous cover of native vegetation; presence of habitat features such as tree hollows and/or food sources like seeds, fruits or nectar; few weeds/less aggressive weeds.
Medium-high	7–8	A range of native plants present; fairly good cover of native vegetation; small weedy patches; some habitat features present.
Medium-low	5–6	A smaller range of native plants present; patchy cover of native vegetation; larger weedy patches, often of aggressive weeds; few habitat features present.
Low	0–4	Few native plants present; extensive weed presence/weeds aggressive.



An example of a low conservation value roadside. Photo – Tamara Wilkes-Jones/Shire of Kalamunda

Uses of RCV information

RCV information can be used by shires and natural resource management (NRM) groups to:

- inform planning decisions, such as strategic road upgrades for the transport of agricultural products
- plan roadwork (capital and maintenance) operations to minimise their impact on native plants, animals and roadside vegetation. Low conservation value roads require less care than those with high conservation values
- identify possible Flora Roads, which may be used to promote a shire to tourists
- strategically prioritise and plan weed control
- apply for grants to fund strategic weed management, revegetation etc
- consider landscape-scale planning – for example, to help identify areas that could be rehabilitated to form a wildlife corridor between large areas of bush, helping animals to move between them.

A downloadable copy of completed RCV maps and supporting reports can be accessed through the RCC website (www.dpaw.wa.gov.au/rcc – look for ‘Roadside conservation value mapping program’, and then ‘Data from surveyed shires’).

Spatial data is available online from the Shared Land Information Platform (SLIP – more information at www2.landgate.wa.gov.au/web/guest) or through the WA Local Government Association’s Environmental Planning Tool (more information at <http://pbb.walga.asn.au/Tools/EnvironmentalPlanningTool.aspx>). Access to raw data may be requested by email to rcc@dpaw.wa.gov.au.



Maps such as this one produced for the Shire of Kalamunda can be used in natural resource management planning, such as the planning of potential wildlife corridors. Sections of high conservation value roadsides (bright green) can link remnant vegetation, bushland reserves and watercourses. This allows animals, such as birds, reptiles and insects to move between patches of bush to search for food, mates and other requirements.

The map can also be used to identify degraded sections that can be targeted for revegetation to achieve a good conservation outcome at the local landscape level. Reinstating native vegetation in these areas improves its ability to act as habitat and a corridor between remnant vegetation on the roadside and on surrounding properties.



Phascogale: this charismatic small carnivore needs large trees with hollows for shelter from foxes and cats, and enough insects and small vertebrates to fuel its high metabolism. Photo – Babs and Bert Wells/Parks and Wildlife

Case study – Shire of Mundaring

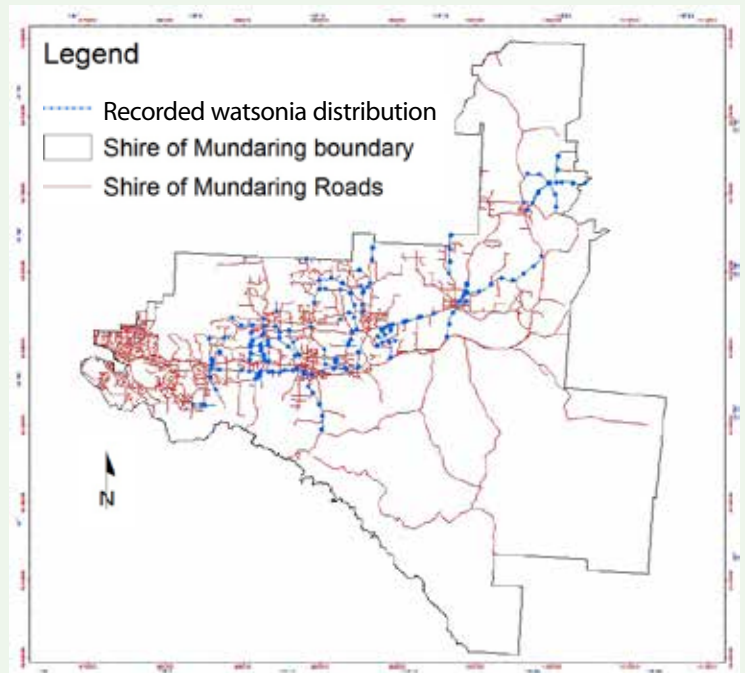
The Shire of Mundaring is a peri-urban shire, with many residents attracted to the area by the presence of remnant bush. The density of homes with gardens provides a challenge for weed control, with plants escaping from gardens into the native vegetation, and soil disturbance helping them to establish as weeds. The shire was presented with an RCV map and report in 2008, and has used the information in a number of ways since.

1. The digital information has been included on the shire's GIS system, which is used for planning capital works and maintenance tasks. It provides a trigger mechanism for engineering and operational staff to request advice from environmental staff on issues.
2. The shire nominated watsonia as one of their priority weeds for mapping, so data identifying where the weed occurred and in roughly what density (low, medium or high) was collected. They used this data and the distribution map of watsonia to:
 - identify and prioritise areas where weed control would be of greatest long-term benefit
 - gain external State NRM funding to pay for watsonia control on strategically selected shire-managed road reserves.

Each year since the initial control there has been progressively less regrowth, and the shire is spending less to control the watsonia that remains. The shire's watsonia control on roadsides was highly visible to residents and visitors, and generated positive feedback. They also found it stimulated wider interest in what residents could do to contribute to native vegetation protection.

3. Giant reed (*Arundo donax*, also called bamboo) was identified as a problem weed in the shire. Although this weed was not mapped specifically, the data included records of places it occurred, and this was used to identify sites suitable for control. External funding was again received to support this work.
4. The information is being fed into the shire's draft *Roadside Conservation Strategy*. Mundaring Council is very interested in roadside conservation, and associated responsibilities such as fire management.
5. The shire assessed the locations of large jarrah habitat trees from the data. Staff will combine this with other data about dieback risk areas, inspect large trees at risk and consider whether they would benefit from phosphite treatment to promote tree health and longevity.

The RCV project has provided the shire with direct management information which has assisted in achieving a strategic approach to roadside management and the sourcing of funds to support this work.



Map showing the distribution of watsonia in the Shire of Mundaring.



RCV mapping enabled the Shire of Mundaring to target areas of problem weeds like watsonia. Note how the weed became densely established on an area of disturbed ground. If left untreated it would have progressively invaded the neighbouring native vegetation. Photos – Brad Thompson/ Shire of Mundaring



For more information and advice

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Information current at March 2016. This information is available in alternative formats on request.

Roadside
Conservation
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