

LIBRARY

Department of Biodiversity,
Conservation and Attractions

This PDF has been created for digital preservation. It may be used for research but is not suitable for other purposes. It may be superseded by a more current version or just be out-of-date and have no relevance to current situations.

R o a d s i d e C o n s e r v a t i o n C o m m i t t e e



ROADSIDES

...the vital link

A decade of roadside conservation in Western Australia (1985-1995)

Outgoing Chairman's Foreword

Despite the many achievements of the Roadside Conservation Committee (RCC), success in developing and conserving biological corridors can never be taken for granted. Like all organisations with the purpose of conserving native vegetation and other natural biological resources, the RCC has a never-ending task. The resource to be protected is strictly limited, while the new technologies which it has to accommodate and the new demands which can be placed upon it are essentially infinite. As management technologies change, and as some sections of the road-using public want roads to carry larger and larger loads and equipment, new ways of conserving and enhancing remnants and corridors of native vegetation will need to be developed.

While a clear and accepted legislative framework is valuable in providing ground rules, conservation programs that are imposed upon local communities, or specific groups like shire councils, are unlikely to be effective. If, however, an understanding of the value of biological diversity in general, and roadside vegetation in particular, and the vision of conservation networks across a sustainably managed landscape, are shared by the local community, then conservation programs will be put into effect because that community wants them.

The current activities of the RCC are designed to change perceptions as well as to provide practical skills to achieve both the primary purpose of roads and the secondary purpose of nature conservation. Increasing the level of these activities and seeking more and more cooperative programs with shire councils, local catchment groups, land conservation district committees and other community groups will help to

ensure that the RCC continues to be a significant part of the network required for the conservation of Western Australia's precious native vegetation.

My ten years as chairman of the RCC have been very enjoyable. The Committee has been fortunate in having had members who have acted with the best interests of roadside vegetation at heart. My thanks to all committee members and others with whom I have worked over this time.

I wish to thank especially the Committee's two Executive Officers, Penny Hussey for the first five years and David Lamont for the second half of the Committee's life thus far. Both of them have put enormous enthusiasm, dedication and energy into the activities of the RCC, often well beyond the normal call of duty, and have been largely responsible for the Committee's various successful initiatives.

Thanks also to the dedication of community members, councils and other workers. They are often the driving force behind conservation action and without their continued commitment roadsides would be greyer places.

Gordon Wyre, as the incoming chairman, takes over what is a challenging but stimulating and often rewarding task. I wish him and the Committee well.



John Blyth
Chairman, Roadside Conservation Committee
(1985-1995)

Incoming Chairman

I am very pleased to be taking over the position of Chairman of the Committee from John Blyth at this time. It is clear to me that John and the other members of the Committee have, over the years, operated most effectively with a strong collective will to provide a firm foundation for roadside conservation.

There is no doubt in my mind that the future for the Committee will be challenging. While there is probably much greater appreciation throughout the community now than there was a decade ago for the need to retain vegetation corridors and for roadside conservation, the differences between specific groups' views on what roadside conservation should entail are perhaps more strongly felt and publicised than ever. There are also clearly increased pressures for improvement of our roads as transport corridors that must be planned carefully so as not to significantly diminish the conservation values of the roadsides.

I hope that the Committee will continue to be focused and innovative in its efforts to increase the conservation knowledge and skills of road managers, and the level and detail of information available to managers and the general community on the conservation values of particular roadsides. The continued preparation of digitised maps of roadside conservation values by local government area will no doubt be a major thrust of the Committee in this regard.

We continually hear references to the near future as being the 'information age'. It will be incumbent upon the Committee to ensure that in a time of potential information overload and conflict, the real message of the value of conserving our roadsides gets through to the most important groups, the road managers and the local communities, so that they in turn may ensure that the roadsides are effectively managed for the part they can play in nature conservation.



Gordon Wyre
CALM
December 1995

The Vision

In a time of rapid change where the demands placed on the natural world are many, it is vital that we work together to preserve our wildlife as best we can. It is an irony that the progress afforded to our modern world by our transport system may play host to one of the most crucial ways of preserving our indigenous flora and fauna heritage.

The Roadside Conservation Committee has a vision of conservation networks across the landscape, stretching as far as do the rail and roadsides they border. These would be fully appreciated and supported by all sectors of the public, especially local communities. Such a network would consist of both conservation reserves and privately owned remnant vegetation, linking the varying lands they cover.

Existing corridor systems along streamlines, road and rail reserves and other service corridors are often all that are left with the potential to provide such linkage across the landscape.



Borealis megastigma

Table of Contents

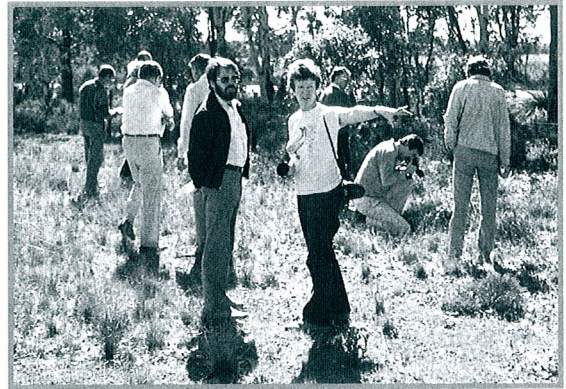
i	Outgoing Chairman's Foreword
ii	Incoming Chairman's Comments
iii	The Vision
1	The Roadside Conservation Committee - Terms of Reference and Committee Membership
2	Roadside Conservation: Past and Present
3	The Importance of Roadside Vegetation
5	Roadside Survey Project
6	Research and Training
7	Roadside Conservation Award
8	Publications
9	Working With Local Government

Illustrations by Margaret Pieroni

The Roadside Conservation Committee

Terms of Reference

The terms of reference of the Roadside Conservation Committee are to co-ordinate and promote the conservation and effective management of rail and roadside vegetation for the benefit of the environment and the people of Western Australia.



Road verge inspection by Roadside Conservation Committee members

Membership

Organisation	Past member(s)	Current member (s)
Conservation and Land Management	J Blyth (Chairman) (Apr 86 - Nov 95)	G Wyre (Chairman)
Main Roads Western Australia	R Shaw (Mar 1986-Feb 1990)	G Norwell (Deputy Chairman)
Westrail	P Martinovich (Aug 1985-Aug 1988)	P Bothwell
Agriculture Western Australia (formerly WA Department of Agriculture)	G Hamilton (Dec 1989-Feb 1993)	G Beeston
Western Power (formerly SECWA)	C Morris (Oct 1990-June 1993)	K Saunders
Greening Western Australia	P Hewitt (Nov 1995-Aug 1989) B Loney (Sept 1986-Oct 1995)	D Redreau
Country Shire Councils Association/WA Municipal Association	Cr A Hillier (Dec 1986-Aug 1989) Cr C Moore (Feb 1986-Dec 1986)	I Purse J North
Bush Fires Board	R Place (Oct 1986-Nov 1992) J Robley (Feb 1986-Dec 1986)	M Cronstedt
Community Representative	J Seabrook	J Seabrook
Executive Officer	P Hussey (Aug 1986-Aug 1991)	D Lamont

Roadside Conservation: Past and Present

During the 1960s, the conservation significance of roadside vegetation became increasingly recognised by the community and the government. This happened in response to rapid agricultural development across the South West of the State and resulted in the establishment of the Road Verge Conservation Committee.

This committee operated from 1968 to 1983, addressing issues related to roadside vegetation conservation. In 1985, in response to continuing and increased concern expressed by local communities, the tourism industry and the conservation movement, the Roadside Conservation Committee (initially called the Roadside Vegetation Conservation Committee) was established.

It was also in the early 1960s that the Premier Sir David Brand initiated the policy of creating wide road reserves in order to recognise and preserve Western Australia's indigenous flora. This policy stated that roads must be created which were wider than was needed for road establishment alone, and that the extra area, or road reserve, be dedicated to the preservation of indigenous species.

"It may be that in 2029, regret will be expressed that so little effort was made as far back as 1929 to ensure the preservation of the rare and beautiful flora. To deny future generations the right to enjoy its wonders is to deserve the censure of the unborn." Emily Pelloe, botanist, 1929

The RCC is jointly funded by Main Roads Western Australia and the Department of Conservation and Land Management. This funding covers the employment of a full-time executive officer, as well as other expenses such as travel, research and training. The RCC's capacity was increased further by an ongoing commitment of \$3000 per year by Westrail in 1986/87.

The Committee is comprised of 10 members, representing relevant organisations and the community. It is chaired by the nominee of CALM's Director of Nature Conservation.

The objectives of the RCC are to promote the protection and enhancement of native vegetation on rail and roadsides; to provide information to government at all levels, voluntary organisations and the public on the importance of road and railside vegetation for nature conservation; and to develop an understanding of the ecological processes controlling roadside vegetation, and through this to devise better techniques for management of roadside corridors.

The RCC seeks to foster communication and co-operation between the various groups involved in roadside management. The committee is available to assist in the development of rail or roadside vegetation management plans, and plays an active role in research, training and information collection in relation to roadside vegetation.

Hebertia stellaris

The Importance of Roadside Vegetation

Native vegetation along roadsides is both environmentally significant and important for the effective management of the road reserve.

The roadside may be the only remaining example of original vegetation within a cleared area. Roadsides may harbour the last few populations of particular rare or endangered plants.

Roadside vegetation is also a vital environmental link for our native wildlife. Patches and strips of native vegetation along rail and roadsides act as a wildlife habitat for many native species of plants, birds, mammals, reptiles, amphibians and invertebrates. Native shrubbery provides nest sites and refuges for native animals, as well as acting as biological corridors.



Salmon Gum (Eucalyptus salmonophloia) dominates narrow road verge providing valuable fauna habitat and tourism opportunities. (Photo by David Lamont)



Flora Road Sign, Woogenellup Rd Shire of Plantagenet (Photo by David Lamont)

These corridors of vegetation provide wildlife with food and shelter, and enable nomadic and migratory species to move between populations otherwise isolated by areas cleared for agriculture or development.

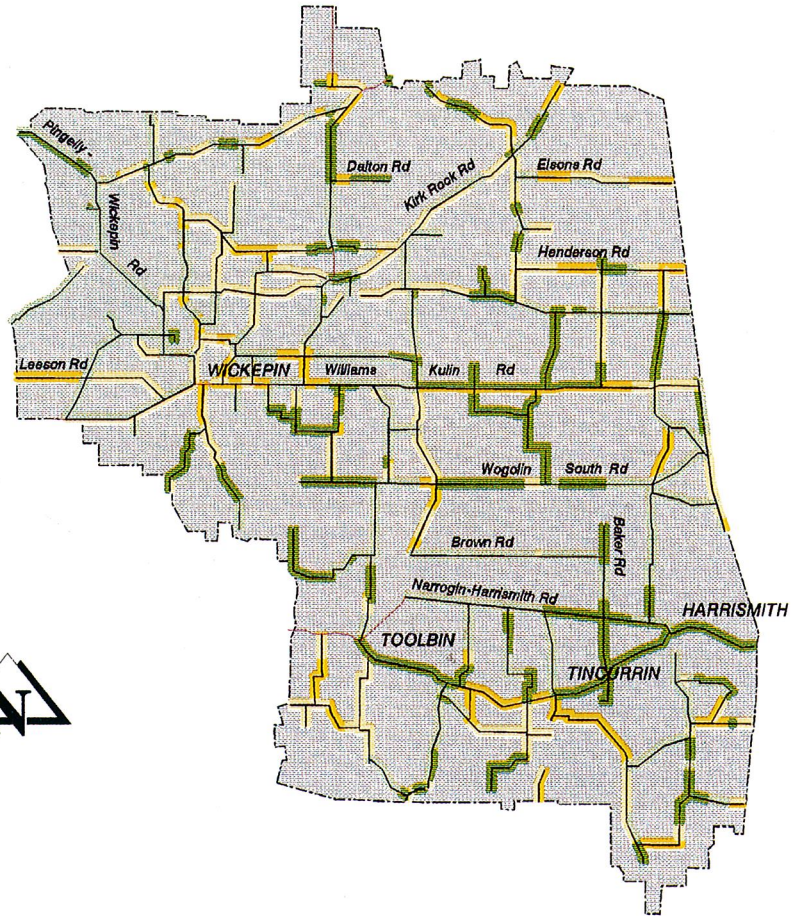
In addition, roadside conservation assists in vegetation mapping and distribution studies, provides a benchmark for study of soil change during agricultural development, and provides a source of local seed for revegetation projects.

The economic value of roadside vegetation is becoming increasingly recognised. Roadside reserves may provide windbreaks and stock shelter areas for adjoining farmland. Native vegetation also helps keep maintenance costs low in terms of soil erosion along the roadside. Native vegetation is also the basis of our important wildflower tourist industry.



Members of Dardanup LCDC utilising RCC maps for Watsonia control program. (Photo by David Lamont)

SHIRE OF WICKEPIN ROAD CONSERVATION VALUE



LEGEND

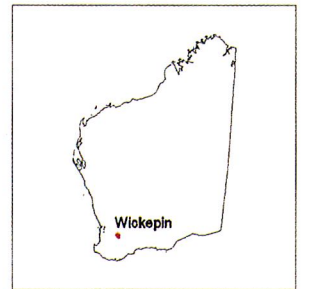
- Roadside Conservation Value**
- 9 - 12 High
 - 7 - 8 Medium High
 - 5 - 6 Medium Low
 - 1 - 4 Low
- Road Reserve Classification**
- Reserve Width of 60m
 - Reserve Width of 40m
 - Reserve Width of 20m (metres)
 - Roads contained within Main Roads database but with no R.C.C. survey information

SOURCES OF DATA:

Roadnetwork derived from D.O.L.A. digital cadastral and Main Roads State of Construction Plans
R.C.C. survey values supplied by Roadside Conservation Committee, Jan. 1994.

0 5 10 15 20 Km

Scale 1:400,000



**MAIN ROADS
Western Australia**

Produced by Main Roads, Survey and Mapping Branch,
in co-operation with the Roadside Conservation Committee,
February 1994

Fig 1: Roadside Survey GIS map. Shire of Wickepin (Main Roads WA)

Roadside Survey Project

One of the most important initiatives of the RCC has been the roadside survey project. These surveys record a number of attributes of road reserves such as width, type of vegetation, number of different species represented, extent of weed cover, use of adjoining land and conservation value. Each road reserve is then given a 'conservation score' based on the information collected.

Surveys have been completed in more than 20 Western Australian shires, and a further 60 surveys are currently being undertaken within the South West land division.

Since 1989, more than 40 000 kilometres of roadsides have been assessed for their conservation value.

The success of roadside surveys is dependent on local community members and groups taking responsibility for their local road reserves. Thanks go to all these dedicated people.

The surveys are carried out by local community members, groups and organisations such as shire councils. They are designed to allow people with limited botanical knowledge to participate. The RCC trains volunteers in how to conduct the surveys.

Survey results are collected by a central computer database which the Main Roads WA Survey and Mapping Branch uses to produce Geographical Information Systems (GIS) maps (see Figure 1).

Each community has a different reason for undertaking the survey, and the resulting maps are used for a variety of projects such as local tourism, cultural and heritage, conservation and landcare projects.

The maps also provide local road managers with details of the conservation value of roads falling within their jurisdiction. This information, and the capacity to overlay maps of conservation value with other information, helps local authorities to manage and plan road reserves more effectively.

The table and graphs following provide examples of data collected during a roadside survey in the Shire of Wickepin.

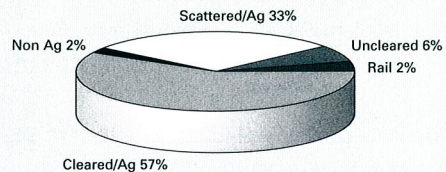
Table 1 shows the percentage of surveyed road reserve with differing conservation value (based on a point system). It shows that 59 per cent of the roadside surveyed has a high or medium high conservation value.

Table 1: Conservation value of roadside vegetation, Wickepin Shire

Conservation value	Kilometres	% of reserve surveyed
high (9-12)	382.60	24.2
medium/high (8-7)	549.55	34.8
medium/low (5-6)	418.65	26.5
low (1-4)	230.41	14.5

The survey also illustrated the importance of vegetated roadsides in the largely cleared central wheatbelt landscape, as Figure 2 illustrates.

Figure 2:



The survey also identifies weed infestation of roadsides. Table 2 shows that almost 60 per cent of roadsides have medium to high levels of weed infestation.

Table 2: Weed infestation of roadsides, Shire of Wickepin

Weed infestation	Kilometres	% of reserve surveyed
High	364.56	23
Medium	559.2	35
Low	658.02	42

As a result of this roadside survey information, Wickepin shire community, councillors and council staff have gained vital information and understanding about their local roads, as well as a greater awareness of the need to conserve native roadside vegetation. This increased awareness and information has been of assistance to the shire in managing high value flora areas with declared rare flora or other species in need of special consideration.

Research and Training

Research

Since its inception, the RCC has been committed to promoting practical research on matters of interest to managers of road reserves, making the results available to as wide an audience as possible. Thus, the Committee has over the years funded a number of projects looking at such things as the enhancement of roadside populations of the endangered matchstick banksia, the control of grassy weeds along roadsides, and workshops to discuss and disseminate information about methods of control for highly invasive bushland weeds including watsonia and bridal creeper.

The research projects that have been funded are:

- Evaluation of a method for spot eradication of *Phytophthora* dieback
- Identification of *Phytophthora* dieback on roadsides
- The effect of log removal on ground fauna
- The effect of herbicides on native vegetation
- Evaluation of the use of fire in the regeneration of *Banksia cuneata*
- Survey and management of *Banksia goodii* on roadsides
- The decline of *Eucalyptus wandoo* in Western Australia's wheatbelt area
- Bridal creeper research
- Survey of the conservation value of disused rail reserve between Donnybrook and Kattaning
- Production of roadside conservation survey maps and overlays of remnant vegetation

Training

Workshops, training and information sessions have been held throughout the life of the RCC. Training has been conducted on specific issues, such as a workshop on the ecology and control of *Watsonia spp.*, and a symposium on bridal creeper ecology and control.

More general workshops and information sessions on roadside conservation and management techniques have also been conducted at the request of local shires and community groups in many different localities (eg. Corrigin, Plantagenet, Jarrahdale).

In 1994, a training program on roadside conservation was developed for local government staff and elected representatives. The RCC works closely with the Municipal Training Services and the WA Municipal Association on this program. Its major aim is to present to councillors and council staff (importantly including works supervisors and maintenance staff) practical reasons for conserving roadside vegetation and practical methods of doing so without sacrificing the safety or efficiency of the shires' road networks. These skills will enable minimisation of damage done to roadside vegetation during maintenance and construction work.

The training program also aims to provide workers, managers and councillors with some insight and appreciation of the value of roadsides, allowing for the development of a conservation ethic and sense of responsibility for native vegetation.

The RCC schedules three training days each year. They are held in different parts of the State, with attendance usually from six to eight neighbouring councils, all with similar interests and problems. To date workshops have been held in Morawa and Wickiepin, with further workshops being planned for Chittering and Gnowangerup.

Roadside Conservation Award

Each year the RCC presents an award to encourage ethical management of rail and roadside vegetation.

The Roadside Conservation Awards were first presented in 1988, and are given to projects that demonstrate sympathetic treatment, management or restoration of vegetation within the rail or roadside environment.

These awards acclaim the achievements of Western Australians who have illustrated their practical involvement in the conservation of the roadside environment.



The Hon. Peter Foss, MLC, Minister for the Environment, presenting 1995 Roadside Conservation Award to Murray Laing, President of the Wickiepin Shire.

Year	Winner	Category	Project
1988	Men of the Trees	Open	Dryandra forest project
1989	Main Roads (Narrogin Division)	Open	
1990	Mrs Ray Paynter	Open	
1991	Main Roads (Bunbury Division) Main Roads (Metro Division)	Open joint winners	Roadside revegetation projects
1992	Men of the Trees/ Armadale Branch WA Wildflower Society	Open	Revegetation of York roadside
1993	Mr D McKenzie Munglinup	Local government	Roadside planting in Munglinup area
1993	Main Roads (Kalgoorlie Division)	Government department	Kalgoorlie Eastern Bypass Revegetation
1994	Mullewa Shire	Local government	Mullewa-Mingenew roadside revegetation
1994	Main Roads (Bunbury Division)	Government department	Revegetation of the South West Highway, Yornup-Palgarup
1994	Hamersley Iron Pty Ltd, Dampier Operations	Gravel pit rehabilitation	Landform rehabilitation Dampier-Paraburdoo rail-road corridor
1995	Shire of Wickiepin	Local government	Ongoing commitment, initiative and achievement in roadside conservation

Publications

One of the RCC's objectives is to provide information on roadside vegetation to members of the public as well as relevant workers and organisations. A wide array of publications is available, which include scientific reports, workshop proceedings and public information pamphlets on wildflower drives.

An indication of available publications is given by those listed on this page.

Technical publications:

Roadside Vegetation Bibliography, a bibliography of roadside conservation available on computer disc
Compilation of a register of roads with vegetation of conservation value
Revolutionise Revegetation (in conjunction with Greening Australia)
Roadside Marking of Special Environmental Areas

Roadside Manual
Vegetation Clearance Guidelines, Chapter of Roadside Manual reprinted as booklet
Fire Management on Roadsides, Chapter of Roadside Manual reprinted as booklet
Borrow Pit Rehabilitation, Chapter of Roadside Manual reprinted as booklet
Watsonia Workshop Proceedings (published by Plant Protection Quarterly Vol.8(3) 1993)
Bridal Creeper Symposium Proceedings (in press)

Study reports:

A Survey of Vegetation and its Relationship to Vertebrate Fauna Present in Winter on Road Verges in the Kellerberrin District of Western Australia
Herbicide Effects on Native Vegetation, report by Dr E.M. Mattiske and Associates
The Decline of *Eucalyptus wandoo* (Blakely) in the Western Australian Wheatbelt Area (J Mercer Honours Project)
The Use of Logs and Litter by Ground Fauna, report by Dr B Wykes

Banksia goodii, with the emphasis on Roadside Populations, published report by Dr B Lamont.

Wildflower Drive Pamphlets:

Coorow Midwest Wildflower Drives
Avon Valley Wildflower Drive
Wildflower Tours of Wickepin Shire
Wildflower Drives of Boyup Brook
Wildflower Drives Three Springs - Mingenew
Wildflower Drives in Morawa Shire (in press)
Wildflower Drives in Plantagenet Shire (in press)
Dieback Kills Wildflowers
Dandaragan Drives
Flora Roads
Ravensthorpe Flora
Wide Roadsides - Flora Drives
Carnamah - Eneabba Wildflowers
Come to Kulin - Wonderful Wildflowers
Coorow Shire Lesuer Area
Wildflowers in Victoria Plains

Published Papers:

Hussey B. M. J. 1991 'The flora roads survey - volunteer recording of roadside vegetation in Western Australia'. In *Nature Conservation 2: The Role of Corridors*, Pp 41-48
Denis A. Saunders and Richard J. Hobbs (Eds.). Surrey Beatty and Sons

Lamont D. A. and Blyth J. D. 1995 (in press) 'Roadside Corridors and Community Networks'. In *Nature Conservation 4: The Role of Networks* Denis A. Saunders and E. M. Mattiske (Eds.). Surrey Beatty and Sons

Three or four public displays take place in different locations each year. Organised by the RCC these are ways to provide the public with information about roadside vegetation and raise awareness about the importance of roadside conservation.



RCC display at Kings Park 1995.
(Photo by Lynda Nottle)

Working with local government

In recognition of the fact that over 75 per cent of the State's country roads are vested in and managed by shire councils, the RCC was established with two representatives nominated by the Country Shires Council. Further, because the RCC has no statutory powers and the responsibility for managing road reserves resides in the road manager, the Committee has, throughout its ten years, acted in a cooperative fashion, providing liaison, advice, training and technical and promotional material to achieve its ends. The support of the WA Municipal Association has been sought, and given, on all policy matters, and any initiatives concerning particular shires are conducted in liaison with the council. Codes of practice for conservation and maintenance of roadside vegetation have been produced by some shires. These documents provide a foundation for all operations and will help to ensure sound roadside vegetation management.

The future

In early 1994, a 'future directions' workshop was held. This was attended by several groups not represented on the RCC. The workshop addressed the questions of what the main aims of the Committee should be, what its major target audience was and what were the key methods it should use to achieve its aims. This workshop gave rise to the current local government training program, as well as some other changes of direction. Overall, the Committee gained new momentum and new contacts and looks forward to its next decade of work in preserving our native roadside vegetation.

The importance of natural corridors stretching across the landscape cannot be over stated. We have a community responsibility to maintain these vital remnants of our natural heritage. Playing its part in this, the RCC is committed to working towards the realisation of its vision.



Banksia drummondii