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**REPORT  
AND RECOMMENDATIONS  
FROM**

**"ITS THE LITTLE BIT OF BUSH  
THAT COUNTS"**

A seminar and workshop on how to  
look after patches of bush in  
the northern wheatbelt,  
especially in the light of  
forthcoming climatic change.

**MINGENEW**

**22nd March 1988**

Roadside  
Conservation Committee



## FOREWORD

In many areas of Western Australia, the remnant vegetation left along the road reserve or in small patches on private land is the last remaining example of the flora which used to exist in the area prior to agricultural clearing. Many rare or geographically restricted plants - once, perhaps, more widespread - are now confined solely or principally to these remnants. In addition, they provide a habitat for animals - roadsides are especially important as corridors for animal movement.

Yet it is difficult to manage small areas of bush so as to ensure their long-term survival. Road reserves especially, being long narrow strips, are notoriously difficult to manage. They are frequently subject to disturbance, both from road making and also from the activities of the authorities that also use the road corridor. In addition, fertilisers, herbicides, weeds and sometimes soil, drift onto the verge from the adjoining paddocks.

Consequently, the Roadside Conservation Committee, in association with the Department of Conservation and Land Management and the Shire of Mingenew, decided to hold a seminar and workshop on management of remnant vegetation.

The seminar, which was attended by 60 people, made a number of important recommendations, one of which was that the proceedings be published. This document is the result.

I believe that it shows quite clearly the concern that exists in the community for the preservation of native vegetation. Its recommendations deserve to be taken seriously, and it is in this light that I urge you to consider them.

JOHN BLYTH  
CHAIRMAN  
ROADSIDE CONSERVATION COMMITTEE

19 April 1988

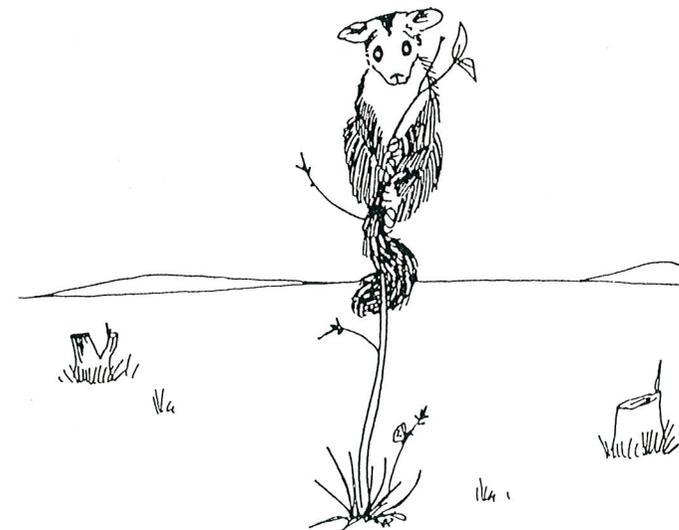
## SUMMARY OF RECOMMENDATIONS

### Remnants on private land

1. That incentives are needed to assist landholders conserve/rehabilitate these areas.
2. That a fencing subsidy would be the best initial incentive.
3. That community involvement can foster revegetation schemes.

### Roadsides

4. That all Local Government Authorities should be encouraged to develop a policy of roadside vegetation protection.
5. That construction and maintenance techniques be used which minimise vegetation disturbance.
6. That Local Government be encouraged to acquire land to widen road reserves to a roadside vegetation width of 20m.
7. That a seed orchard to provide seed for rehabilitation work be established in each Shire, in conjunction, perhaps, with a small nursery.



## INTRODUCTION

The Chairman, Cr Dave Brindal, President, Shire of Mingenew, opened the proceedings by welcoming the 60 participants.

He explained that the seminar would look at the maintenance of patches of remnant bush, firstly through a series of talks, then through workshop discussion sessions. It was hoped that the workshops would be able to make firm recommendations for action.

### Programme:

- 9.30 a.m. Registration and Morning Tea
- 10.00 a.m. Welcome: Dave Brindal
- 10.05 a.m. The "Greenhouse Effect" and other causes of climatic change - what it will mean for conservation: John Blyth
- 10.45 a.m. Conservation value of remnant bush areas: Geoff Mercer
- 11.15 a.m. Roadside management for conservation, including acquisition: Bob Shaw
- 11.45 a.m. Conservation of vegetation - alternatives to acquisition: Gary Whisson
- 12.15 p.m. LUNCH
- 1.00 p.m. Aims and policies of the Roadside Conservation Committee: Joe North
- 1.15 p.m. Seed collection and starting a nursery: Joanna Seabrook and Bert Buist
- 1.30 p.m. Management and regeneration techniques: Pat Ryan
- 1.45 p.m. Workshop session: discussions in small groups.
- Topics include:
- . Planning roadside conservation management
  - . Planning farm conservation management
  - . Nursery techniques at a local level
  - . Development of community projects
- 2.30 p.m. Workshop session: brief reports from groups
- 2.45 p.m. Forum: general questions to all speakers
- 3.00 p.m. Summing up: Dave Brindal
- 3.10 p.m. Afternoon tea.  
Individual discussions to continue as long as wanted.

## SUMMARY OF POINTS MADE BY EACH SPEAKER

"Greenhouse effect and other causes of climatic change - what they will mean for conservation."

John Blyth, Department of Conservation and Land Management, Perth.

The way in which the "greenhouse gasses" are increasing in the atmosphere, and how this will lead to a global rise in temperature, were described.

For the SW of WA, it is predicted that

1. average temperature may rise by 4°C
2. winter rainfall may decrease by 20%
3. runoff may decrease by 40%
4. summer rainfall may increase in northern wheatbelt
5. there may be an increase in extreme events e.g. more floods, more and stronger windstorms, more droughts.

Some implications of this for conservation are:

1. loss of wetlands
2. vital need to retain patches of bush connected by bush corridors throughout the agriculture area, to enable organisms to migrate as the climate changes.

The Federal Government has convened a "Greenhouse Project" which is liaising with industry groups and a WA advisory committee to develop plans to cope with possible future effects.

"Conservation value of remnant bush areas".

Geoff Mercer, Department of Conservation and Land Management, Geraldton.

The conservation system in WA has been developed as land becomes available for reservation and thus includes reserves of all different shapes and sizes. Roadside vegetation are linear reserves and an important part of the total picture.

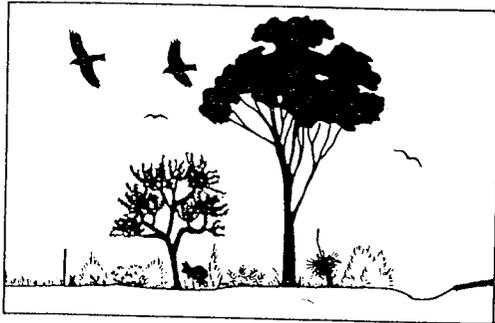
Value of roadside vegetation

1. most visible bush - tourist resource
2. plant genetic resource - horticulture
3. wildlife corridor
4. stock shelter
5. erosion and salinity control.

Management problems for small bush remnants on farms and roadsides include

1. weed invasion
2. fire management
3. excessive clearing for firebreaks
4. vermin control
5. gravel extraction
6. rubbish dumping.

These problems can be overcome with forethought and planning.



Roadside management for conservation.

Bob Shaw, Main Roads Department, Perth.

All staff must be committed to the philosophy of roadside conservation, and for a Shire Council that means from the President down. With this commitment it is possible to plan roadworks to conserve as much roadside vegetation as possible, even in a 20m road reserve.

This can be achieved by thoughtful planning including:

1. considering a hierarchy of roads for the road network, and not constructing each one to the same dimensions and clearing width.
2. doing an environmental assessment first (this is a legal requirement)
3. having a site-specific road design
4. clearing on one side of the road reserve only, thus leaving a wider strip of vegetation on the other
5. skewing the road to avoid special areas of significant vegetation
6. careful siting and progressive rehabilitation of borrow pits
7. avoid taking borrow for roadworks from the road reserve
8. resumption of land for environmental widening.

Construction and maintenance techniques can be used to achieve these goals quite economically.

MRD's policy accepts that the minimum width of roadside for a viable, self-sustaining community of native vegetation is 20m. Assuming that the road and its works occupy 20m, the desirable minimum widths for highways and main roads becomes:

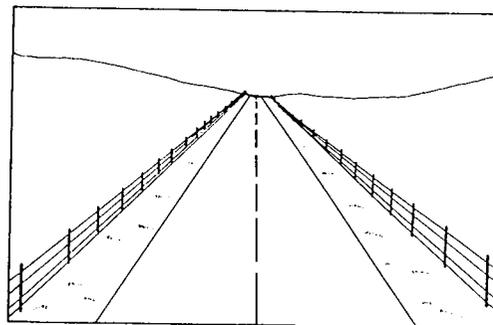
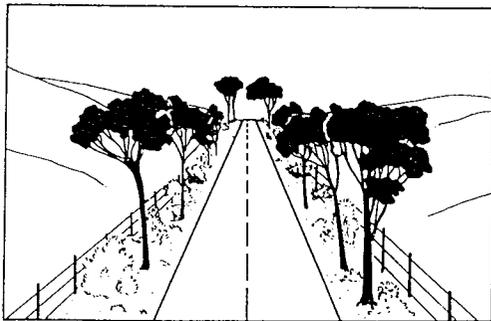
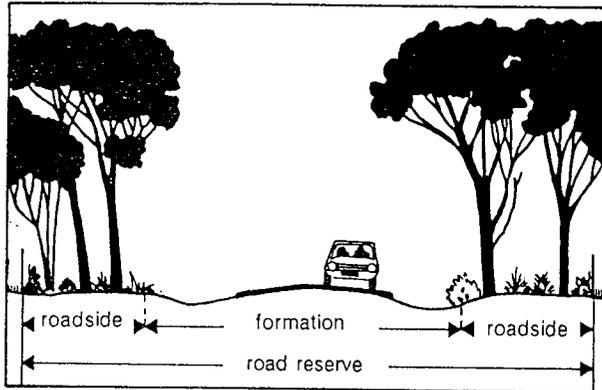
1. through developed agricultural areas
  - 50m wide with one verge
  - 60m wide with two verges

2. through undeveloped agricultural areas  
in uncleared farmland, 100m  
in Crown land, 200m

3. through pastoral and arid areas, 200m

4. in conservation areas (e.g. National Parks) 20m.

Each Shire should develop a policy of sound management principles and remember that the maintenance of roadside vegetation is a public trust, and our Western Australian heritage.



Conservation of vegetation - alternatives to acquisition.

Gary Whisson, Environmental Protection Authority, Perth.

The SW of WA has a unique flora, of which many species are at risk due to agricultural clearing and climatic change. The traditional way to protect them is in a conservation reserve, but this is costly and there simply aren't enough reserves also opportunities to create further large reserves are very limited. They form the core of the conservation system, but bush remnants on private land and road reserves form the linkages which are essential to make the system work. Landsat images of the northern wheatbelt showed the fragmentary nature of remaining bush areas very clearly.

Alternatives to acquisition of land are needed to supplement the reserve system. Options available under existing legislation were investigated. Most options have been developed to suit a specific purpose not primarily associated with conservation of vegetation, and are of limited value to this role (i.e. The Soil and Land Conservation Regulations, Town Planning Act provisions for Landscape/Environmental Protection and Heritage, and Country Water Supply Act - Catchment clearing regulations).

Several other possibilities were considered. Widespread application of vegetation clearance controls were rejected as an option because of the division and negative attitudes towards remnant vegetation that they create. Widespread community support for the retention and management of remnant vegetation is important for its continued survival.

The potential application of incentive schemes was discussed. Particularly when limited to voluntary management agreements it offers many advantages. The Heritage Agreement Scheme operating in South Australia is an example of this approach. It could be adopted in Western Australia through amendment to Section 16 of the CALM Act.

The important component of this is the security of conservation purpose that it provides, which enables Governments to justify providing substantial management incentives. A recent survey in four wheatbelt Shires of farmer attitudes to native vegetation, indicated that substantial fencing subsidies would be the most effective incentive.

## Aims and Policies of the Roadside Conservation Committee.

Joe North, President, Shire of Morawa.

The history of roadside conservation was described and it was emphasised that rural road reserves of greater than 20m width had, since 1952, been created specifically for wildflower conservation.

This arose as a response to widespread public concern about the loss of wildflower areas due to the increased pace of agricultural development. Time and again there were calls to widen roads to preserve wildflower drives. Former Premier, Sir David Brand, believed this was very important, as wildflowers were the basis on which a tourist industry could be founded.

Thus, wherever new agricultural land was being released, the government made it a policy that road reserves should be surveyed 3, 5 or even 10 chains (60 - 200m) wide. Owners of these new blocks were informed that the wide roads had been created for flora conservation, and they were not permitted to plough or work the land outside their boundaries.

Wide road reserves are thus part of government policy to create reserves for the preservation of wildflowers, and, as such, all the area outside the designated construction and maintenance zone should be managed for flora conservation.

The RCC works with Local Government to promote careful management that would enable the preservation of roadside vegetation wherever possible, and yet not impair the safety or efficiency of the road system.

## Native Seed Collection.

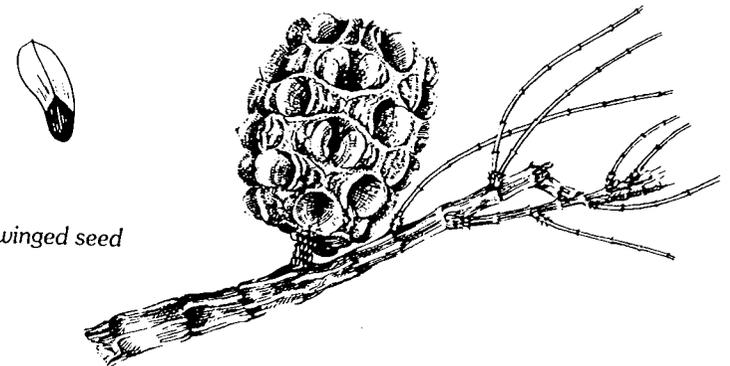
Joanna Seabrook, WA Wildflower Society, Perth.

It is of the greatest importance to retain as much vegetation as possible as we can never really replace what was there, the best we can do in revegetation will always be second best, nevertheless we must do the best we can to copy nature. Revegetation plans should include wildflower shrub species as these are the nectar and seed producing plants which provide food for all manner of creatures which in turn are capable of protecting trees from insects which damage and may destroy them.

Local plants are genetically adapted to grow locally, so in any regeneration plan it is essential to obtain local seed. This can be done from the bush (with appropriate permission and licenses) or a seed orchard may be planted to provide for future needs, as seed from the wild is becoming increasingly scarce. Direct seeding of trees has been very successful in many areas where it has been tried. Wildflower shrub seed could be included in a seeding mix with the aim of producing a more varied result.

Seed collection, preparation and storage was demonstrated. It was emphasised that the species of seed collected must suit the purpose that you want for your planting.

A booklet describing means of establishing a seed orchard and techniques of collecting and storing seed is available from the Wildflower Society.



*Sheoak with winged seed*

## Starting a Nursery.

Bert Buist, Morawa.

A small shadehouse, now supporting a nursery run by volunteer labour had been constructed in Morawa.

Total cost	\$2,873
Grant from Greening Australia	<u>800</u>
Cost to Shire	\$2,073

It is extremely successful, and the Shire's costs will be covered by sale of plants in the first year.

## Management and regeneration techniques.

Pat Ryan, Department of Conservation and Land Management, Geraldton.

Management of roadsides is a community responsibility, and there may be a need to enlarge the vegetation zone along the roadside. In planning farm plantings, this could be taken into account.

Small bush remnants need management, mainly weed, fire and vermin control. They can be enriched by direct seeding, planting potted stock, or attempting natural regeneration using the ash bed techniques. Fencing to remove grazing pressure is the essential first step.

Various techniques to that can be used in management were then described.

## DETAILED RECOMMENDATIONS FROM EACH WORKSHOP

### WORKSHOP 1

#### Planning Roadside Conservation Management

Facilitator: Bob Shaw

#### RECOMMENDATIONS

1. All Shires should be encouraged to develop a policy which clearly makes a commitment to the protection of roadside vegetation. (It was acknowledged that the Shires of Coorow, Mingenew and Morawa already have a stated roadside vegetation policy).
2. Local Government should be encouraged to acquire land to widen road reserves to a minimum of 40m with the aim of achieving a well conserved roadside vegetation width of 20m. Re-fencing of the acquired land would be carried out by the landholder when appropriate as part of a refencing programme.
3. The taking of borrow materials from road reserves should be discouraged.
4. Areas disturbed by roadworks should be rehabilitated using appropriate regeneration techniques.
5. Community involvement should be fostered and encouraged to establish seed nurseries and produce seedling stock from local indigenous plants for use in replanting areas disturbed by roadworks and also for general distribution to the community. This would also include seed collection for use in direct seeding revegetation schemes.
6. During the planning stages of roadworks, Local Government and the Main Roads Department should inform public service utilities of work proposals.
7. Because of damage to trees by corellas and galahs in some areas, measures should be taken to reduce this nuisance which is seriously affecting the survival of some species of eucalypt trees.
8. The findings of this workshop, the aims of the seminar, and a short summary of the topics presented by the speakers should be publicised and, where possible, other seminars be conducted by the Roadside Conservation Committee.

## WORKSHOP 2

### Planning Farm Conservation Management

Facilitator: Pat Ryan

#### RECOMMENDATIONS

1. Federal Government
  1. To allocate more funds to conservation of the natural environment/heritage on private land.
  2. To seriously challenge the agricultural financial system, including debt structure, to improve farm profitability. Improved farmer profits will result in greater farmer contribution towards - in their eyes - non productive conservation of the natural heritage (remnant bush).
  3. To allocate more funds to research through CSIRO and State instrumentalities into regeneration and plant phenology.
  4. To give 150% tax deductability for fencing required for conservation.
2. State Government
  1. To improve the number of staff, and accessibility to that staff, concerned with farm planning (Agriculture Dept) and tree advice (Dept of C.A.L.M.).
  2. To improve public awareness and public education in matters concerning conservation of the natural heritage.
3. Local Government
  1. To ensure allowances are made for rate reductions for conserved areas.
  4. The agricultural press to be encouraged to continue reports on successful management and rehabilitation of remnant bush.
  5. Heritage Agreements similar to South Australia be studied as a possible means of ensuring conservation on private land. Details of South Australian and Victorian legislation should be widely distributed to encourage debate on the matter.
6. Current situation
  1. Farmers need education on the values of remnant bush in the overall farm plan.
  2. Fencing is considered to be the major cost in ensuring conservation.
  3. Rabbits and kangaroos are considered to be detrimental to regeneration of degraded areas. (Sheep must be included here.)

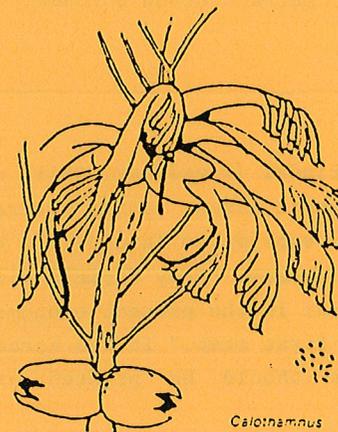
## WORKSHOP 3

### Nursery Techniques at a Local Level

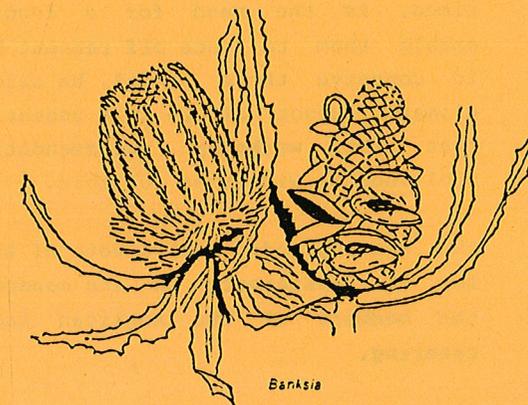
Facilitator: Joanna Seabrook

#### RECOMMENDATIONS

1. An educational programme should be developed to publicise all aspects of growing local native plants, from seed collection to direct seeding or raising potted stock.
2. Persons should be encouraged to collect and grow local seed.
3. Seed orchards to grow local shrub seed should be established in each Shire.
4. Shires should be encouraged to set up a nursery to raise local plants. Assistance for this and other projects should be sought from Tree Committees, Soil Conservation Committees or other interested groups.
5. Notes of successful (and unsuccessful!) growing methods used in local conditions should be kept, and the information made available throughout the area.
6. Schools should be involved in the local plants programme in as many ways as possible.



*Calothamnus*



*Banksia*

## WORKSHOP 4

### Development of Community Projects

Facilitator: John Blyth

#### RECOMMENDATIONS

1. Community projects should be developed by local groups, as these are usually more successful than those organised by non-local groups.
2. Project goals need to be clear and positive results achievable in the short term, or if a long term project it needs to have defined short term interim goals that can be successfully achieved to give positive feedback. Feedback of results would enable continuous development of the project.
3. The social side of projects is also important as an incentive for people to maintain involvement.

Some projects which could be considered are:

4. Establishment of a seed orchard to provide local seed for revegetation projects.  
Co-ordinating group eg CWA
5. Establishment of walk trails in Shire reserves, combined with rehabilitation of degraded areas if necessary.  
Co-ordinating group, eg youth groups
5. Individuals should be encouraged to take on the protection and enhancement of a small area, perhaps along a roadside.  
Co-ordinating group eg Lions.

#### SUMMARY

In his summing up, Chairman Dave Brindal (President, Shire of Mingenew) mentioned that a most important issue, raised several times, is the need for a fencing subsidy to landholders to enable them to fence off remnant bush areas. "Many farmers wish to conserve these areas", he said "but in the present economic climate cannot afford this essential first step." It was agreed that the workshop recommendations should be printed and published as widely as possible.

The meeting ended with a vote of thanks to the Shire of Mingenew for its assistance in the conduct of the seminar, and also to the members of the Anglican Ladies Guild who undertook the catering.