

# LIBRARY

Department of Biodiversity,  
Conservation and Attractions

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## Major programs

### - Survey & Mapping Program



- Characteristics - eg integrity, diversity of species present
- Habitat for animals - eg trees with hollows, flowering plants for nectar and fruit eating animals
- Weeds - level of weed invasion; types of weeds present

### Mapping useful for:

- Strategic decisions on road upgrade and maintenance
- Strategic applications for clearing permits and offsetting/revegetation
- Planning and managing for Weeds,

Dieback, Fire, Salinity

- Budget-setting and Funding applications

Repeated data to see a trend in tree decline or improvement

## Roadside Surveys

- What?**
- Community/volunteer survey
  - 80% of roadsides within a Shire

- How?**
- Vehicle-based survey
    - using smart phone
  - RCC assessment
  - Values mapped using GIS

- Why?**
- Inventory of roadside vegetation condition
  - Management tool for road managers



### -OVERVIEW

-We survey about 4-5 shires a year in conjunction with volunteers and local NRM groups.

-Snap shot survey of all shire managed roadsides in a shire.

-80% of the rural roadsides are surveyed, with over 1000km of road in some shires and limited volunteers, can take 2 years to complete

-The survey is done with 2 people in a car one as driver and one using the survey device which is a smart phone with a purpose built survey program loaded on it

-The survey assesses the values of the roadside using multi choice & yes/ no questions and these are mapped using GIS

-The survey is an inventory of roadside vegetation condition.

-A map and report are produced which aid the shire and NRM groups in managing roadside vegetation

## Roadside Vegetation Surveys

### ➤ What we are looking for:

- Characteristics of the vegetation
- Features useful as habitat
- Weeds



Start	Left	Right	Weeds	Finish
NO			Connects Uncleared Areas	
			Flowering Shrubs	YES
			Large Trees with Hollows	YES
			Hollow Logs	YES
NO			Yellow Hockey Sticks	



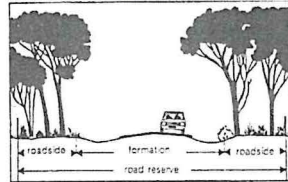
We are looking for several characteristics – including the integrity of the road, diversity of species present

- Habitat for animals - eg trees with hollows, flowering plants for nectar and fruit eating animals

- Weeds - **level of weed invasion and types of weeds present**

## There are more than 10 roadside attributes to record including.....

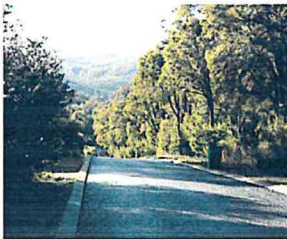
- Road reserve width
- Adjoining land use
- Vegetation width on left and right sides
- Vegetation type
- % native vegetation
- Diversity
- Weed infestation (%);
- Tree decline
- Structure of vegetation (Trees, shrubs, groundcovers)
- Value as a biological corridor/habitat features
- Presence of utilities (eg. water, power).
- Nominated weeds and additional weeds



- **This gives you an indication of the varying attributes we are looking out for:**
- Width of road reserve – fence to fence
- Width of vegetation on left and right sides;
- Structure of native vegetation (Vegetation layers eg. Tree, shrubs groundcovers;
- % of native vegetation
- Number of native plant species (diversity)
- Value as a biological corridor/ habitat features
- Weed infestation %
- Nominated weeds
- Adjoining land use and
- Presence of utility (eg. water, power).

## Surveys determine whether the roadside is...

High conservation value



Low conservation value



All survey information including photos is automatically uploaded to a purpose built website and the data can be exported in various formats

The surveys determine whether the road is high conservation or low conservation value



## Compilation and presentation of survey results

Once surveys completed:

- Data is compiled and analysed by RCC
- Maps are produced by GIS
- Data, maps, report and shape files are supplied to the shire/ NRM group when the results are presented
- Maps & Reports also available on RCC website & SLIP



-Once the surveys are completed which can take a couple of years if the shire if it's a large shire with lots of roads & when you survey at 5 or 10km/hr it takes a long time!

-All the data and maps are supplied to the shire and NRM group  
The maps and reports for all the shires that have been surveyed are available on the RCC website and maps are available on SLIP

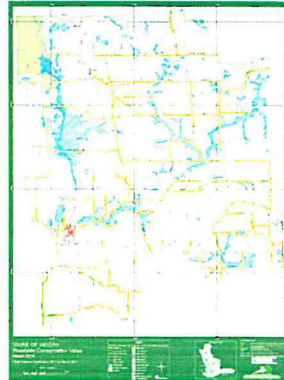


## Products / Results

### Roadside Conservation Value Map

#### - useful for planning & management:

- Road upgrade & maintenance
- Weed control or revegetation
- Budget-setting & funding applications (LGA & NRM)
- Managing weeds, dieback, fire, salinity etc
- Tourism – Flora Roads
- Incorporate into Landcare & NRM projects
- Road reserve management plans and policies

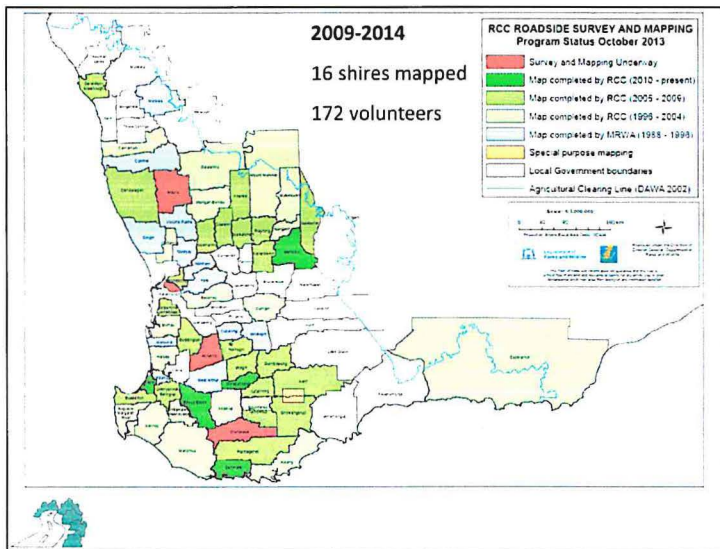


The shire and NRM group receives a shire map like this with roadside conservation values and weed overlays .

The mapping and recommendations in the accompanying report are useful for:

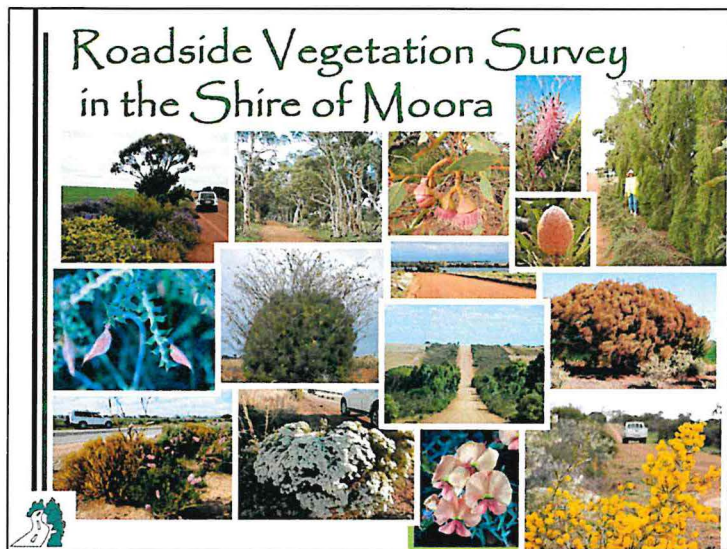
- Strategic decisions on road upgrade and maintenance
- Strategic applications for clearing permits and offsetting/revegetation
- Planning and managing for Weeds, Dieback, Fire, Salinity
- Budget-setting and Funding applications for weed control and revegetation especially if road contains threatened species or communities
- Tourism aspects and aesthetics through the flora roads program
- Incorporating into landcare and NRM projects – salinity, wind erosion
- Helping to develop road reserve management plans

and policies.

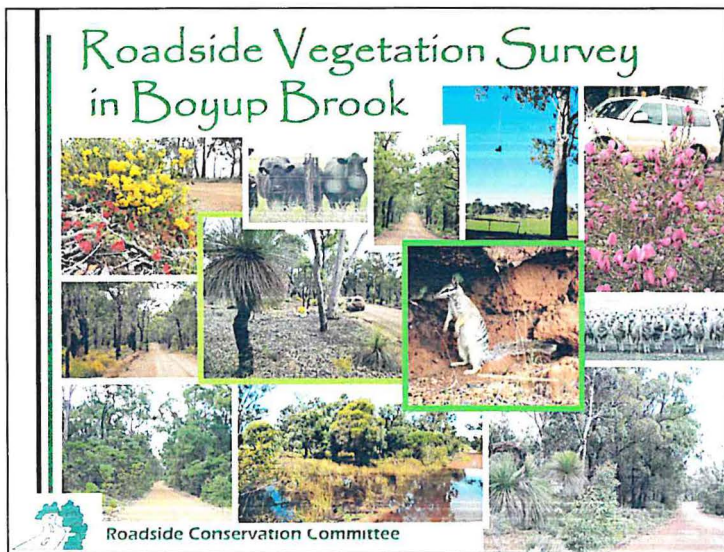


16 shires have been mapped in the last 5 years including a complete overhaul of the survey program with new survey devices, new survey program and associated website 172 volunteers have been involved in the surveys.

Shires we are currently mapping are in red and those where mapping has most recently been completed in dark green through to light green. The shires in white have never been mapped, so as you can see, there's still a bit of work for us to do...



Example of a recently completed shire and some of the things we have discovered & encountered on the roadside



And another example in the Shire of Boyup Brook, we've surveyed in all kinds of weat

## Roadside Conservation Value

Attributes are generally scored from 0 to 2.

Added together = conservation value score: 0 – 12.

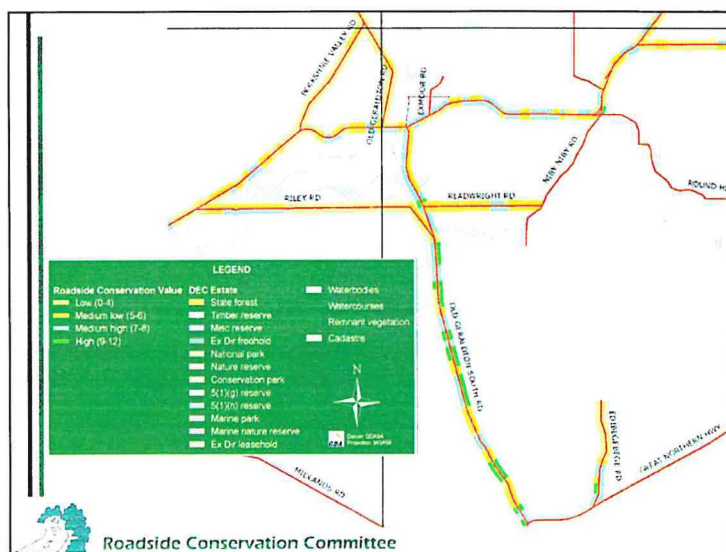
RCV scores are grouped into conservation status categories, and represented visually by:

Conservation Status	Score	Colour
High	9-12	Dark Green
Med-high	7-8	Light green
Med-low	5-6	Orange
Low	0-4	Yellow



Roadside Conservation Committee

This shows how the roads are scored



This close up of the map shows how the roadside vegetation is depicted by those 4 co

You can see that both sides of the road were assigned individual values and these val









# Weeds

The Shire nominates 6 weeds to target. The extent of these weeds are recorded when they are seen.

Reach Mobile 10:19

Start Left Right Weeds Finish







**Weed observations**

Weed Name	Extent of Weeds
 African Love Grass	
 Eastern States Wattles	
 Fleabane	
 Plantain	
 Tagasaste	
 Victorian Tea Tree	

Reach Mobile 10:20

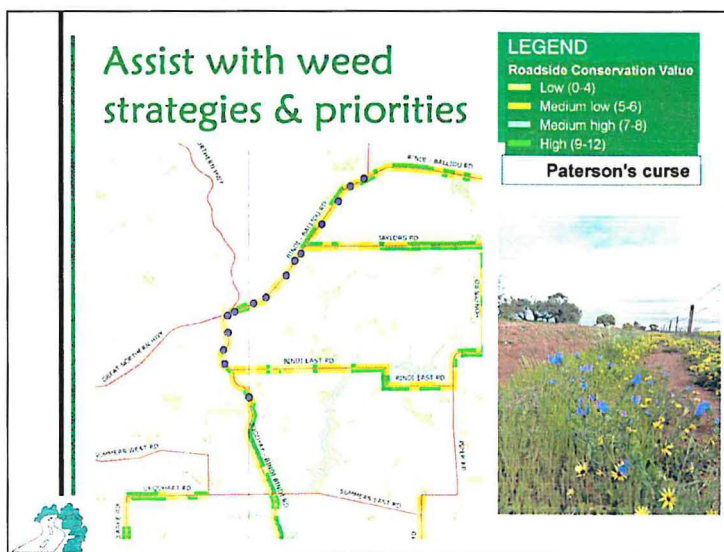
Start Left Right Weeds Finish

**Weed observations**

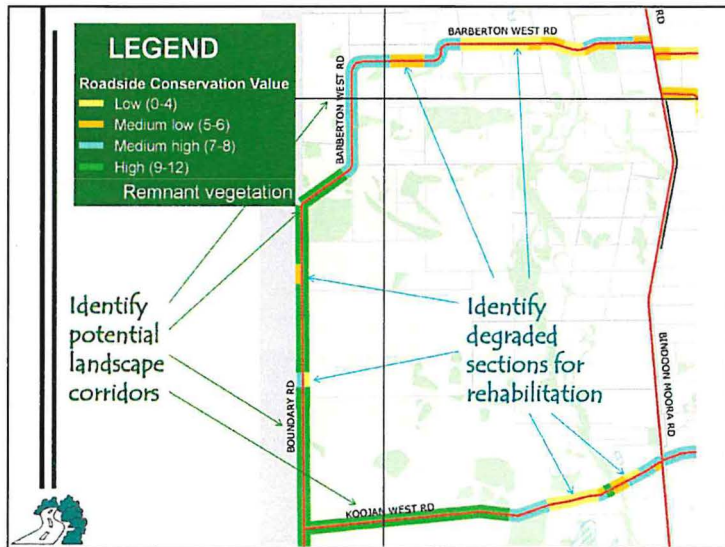
Weed Name	Extent of Weeds
 African Love Grass: 0 - 30%	
 Eastern States Wattles: 30 - 70%	
 Fleabane: None Present	
 Plantain: 70 - 100%	
 Tagasaste: 30 - 70%	
 Victorian Tea Tree: None Present	



-Shire selects 6 weeds to target and these are the ones they receive weed overlays for showing locations of the targeted weeds



The roadside weed overlays can be used in setting annual weed control priorities and in developing longer term strategies for the Shires roadsides.

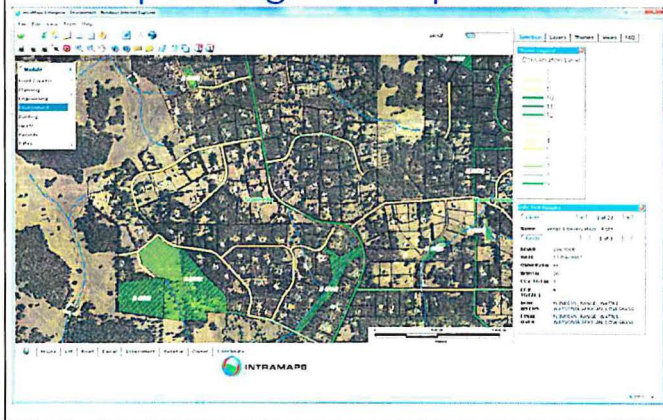


- The Map can be used in natural resource management planning.
- For example: The planning of **potential wildlife corridors**. Sections of high conservation value roadsides (dark green) can link remnant vegetation, nature reserves and watercourses .
- Also these areas may be suitable as part of a **Flora Road**, wildflower drive or scenic route.

### Revegetation

- The map can also be used to identify degraded sections to target for revegetation

## Taking it to the people... incorporating into corporate GIS



In closing an example from Shire of Mundaring as to how the mapping data has been used – w

## Targeted grant applications

- 2010 DEC State Community Grant – Watsonia control
- Aim – locate watsonia infestations within roadsides and close to remnant bushland
- Eradicate watsonia and revegetate with native plants
- RCC data was used to identify watsonia sites within Jane Brook Catchment
- Based on survey, approx. 50km of watsonia along roadsides



And some shires have used the weed overlay data for targeted grant applications, while other sl

## Roadside Surveys – key messages

- Local community involvement
- Engagement with shire
- Useful information and products
- Better management of roadsides



Roadside Conservation Committee

Allows communities to be involved and have a voice in roadside vegetation management  
Allows RCC to engage with the local government  
Useful recommendations, maps and reports are produced  
so shires & NRM groups can seek funding and manage our roadside vegetation better