

# Assessing Roadside Conservation Value



The Roadside Conservation Committee

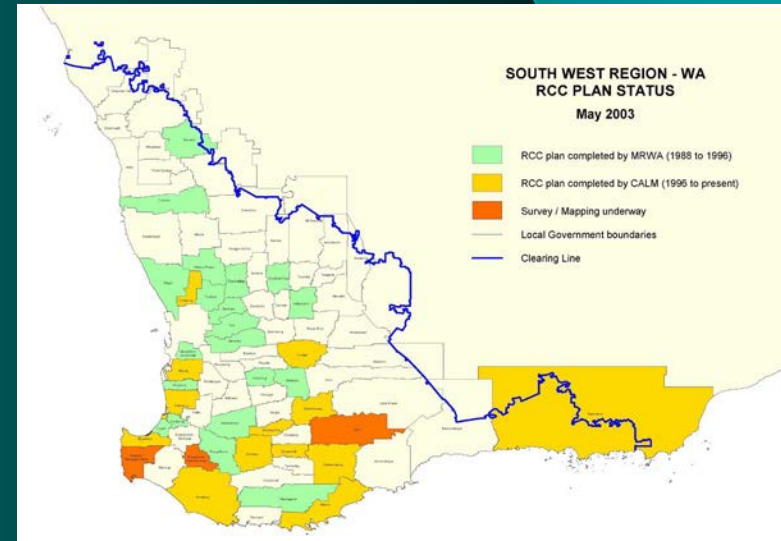
# The Task Ahead: Roadside Surveys



The Roadside Conservation Committee is coordinating surveys and mapping of all the roadsides within the south west land division and outlying areas.

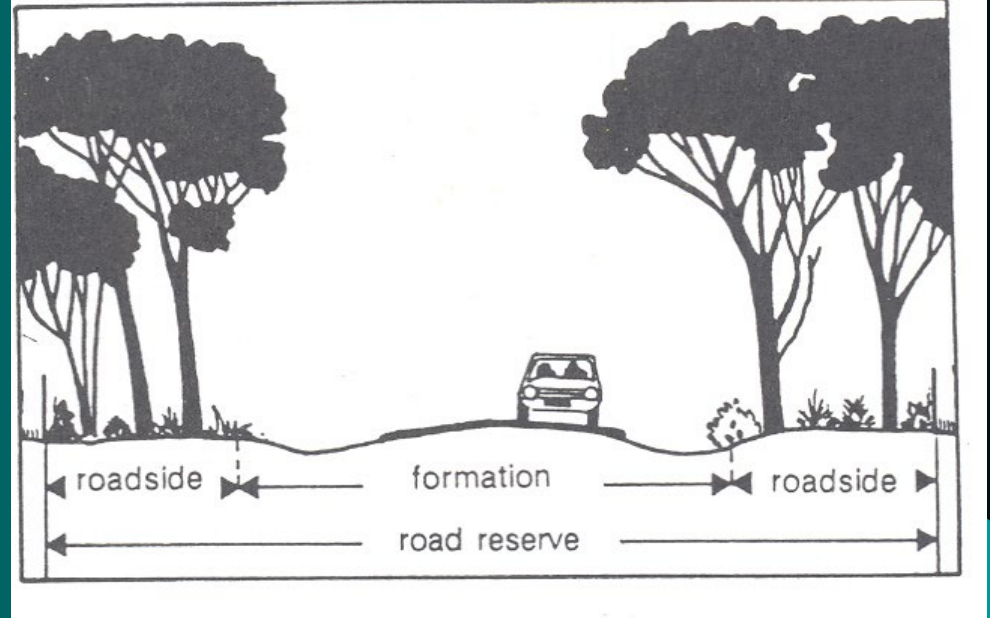


Surveys have been completed in 35 shires with > 75,000 kms of roadside being surveyed by volunteers.



# What is a Road Reserve ?

When a public road is created, a corridor of land is dedicated for this purpose and called the road reserve.

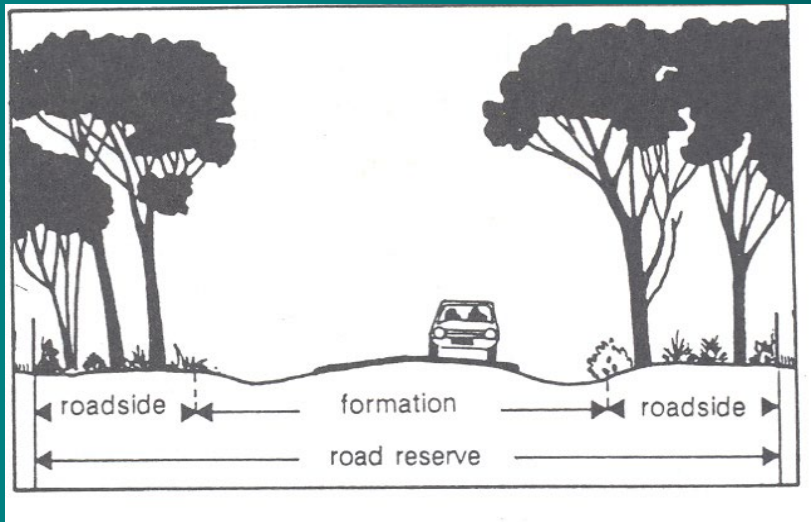


Care, control and management of the road reserve is carried out by either:

- Main Roads Western Australia,
- DCLM, or
- a Local Government Authority.

# What Is a Roadside ?

The road formation and its associated drainage works are accommodated within the road reserve.



The remaining space is called the roadside.





# What Is the RCC's Role?

- ✓ We **train** community volunteers undertaking Roadside Surveys,
  - ✓ The RCC **process** the roadside data collected by the community,
- ✓ We **assess** the conservation value of the roadsides, and allocate conservation scores between 0-12,
  - ✓ The RCC **generate and supply** the Shire with Roadside Conservation Value maps and weed overlays,
- ✓ We provide a summary **report** outlining the results of the roadside survey



# What Is Your Role?

Community volunteers can:

- ✓ Distribute relevant information about common weeds, native plant communities and fauna,
- ✓ Collect the survey information,
- ✓ Organise to work in teams of 2 people per vehicle.



# Why Survey Roadsides?



- ❖ People who use, live adjacent to or work within the roadside can cause damage to the plants & animals living there.

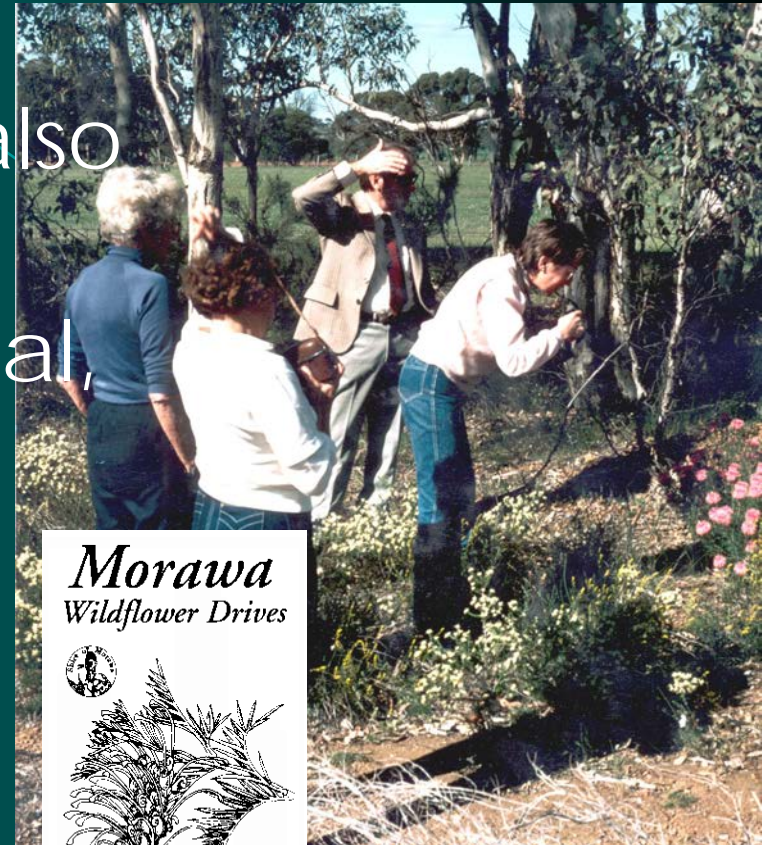


- ❖ Taking part in the roadside survey raises awareness of the threats and impacts.

# Why Survey Roadsides ?

❖ Local communities can also use the information to promote significant historical, cultural or environmental sites for tourism.

❖ Develop Wildflower Drives for tourism





# Why Survey Roadsides ?

- ❖ Protect important fauna habitat
- ❖ Integrate the RCV map into revegetation projects, and other landcare purposes



**Retaining roadside vegetation will minimise soil erosion**



# Why Survey Roadsides ?



❖ In order to plan road works so that important areas of roadside vegetation are not disturbed, road managers should know of these areas.

❖ These maps will also be important for service authorities such as Western Power, Alinta Gas, Telstra and the Water Corporation, which often use the road corridor for the location of their services.



# Why Survey Roadsides ?



## ❖ Land degradation Issues

Salinity affected road surface  
in Bencubbin



Sand drift  
smothers  
vegetation  
Koorda



# Why Survey Roadsides ?

- ❖ Fire control: the maps have been used to develop regional or district fire management plans,



- ❖ The weed overlays are especially useful in determining fire threats throughout the seasons

# Why Survey Roadsides ?

- ❖ Changes to the E.P Act.

- ❖ Assist in the development of Shire *Roadside Vegetation Management Plans*, and in obtaining approval to clear vegetation for maintenance and construction

- ❖ The maps and survey information will be used as a reference, in setting recommendations and in planning.



# Benefits to the Shire & Community?

- ✓ Increase knowledge about, and awareness of, threats to roadside vegetation, and human impacts;
- ✓ Community ownership of map and survey data;
- ✓ Easy to interpret Management Tool:
  - Weed control, Wildlife corridors,
  - Fire, Tourism,
  - Revegetation, Funding applications - NRM
- ✓ Builds bridges between community, Landcare and Shire;
- ✓ Baseline data, useful for measuring changes over time.

# The Roadside Survey Is Vehicular Based

❖ The survey is best done with 2 people per vehicle:

1. a driver-observer, and
2. an observer-recorder

❖ In most instances the survey can be done @ approximately 30km/h

👉 Remember **SAFETY FIRST** particularly if driving slowly or stopping



# Things That You Will Need to Begin Your Survey

- ❖ A list and map of the roads you are surveying.
- ❖ Survey forms (take plenty), also pens/pencil, highlighter, clipboard and a stapler.
- ❖ A compass, so as to indicate direction of travel and LEFT or RIGHT side of road.



Make sure you know your right from your left!



# 1. In the Beginning



Date 03/10/03  
Observer(s) Kate and Amy  
Road name Warner Rd  
Nearest named place Ferndale  
Direction of travel SW  
Starting point intersection of Warner and Foggy Rd  
Odometer reading 920.4  
Ending point 0.5km past Yellow River Bridge  
Odometer reading 924.8  
Length of section 4.4 km

# 1. Changing Sections

Some roadsides may be uniform along their length, and so need only one survey sheet.

Others may be quite changeable, for example

- ✓ Road reserve width changes, say from 20m to 60m,
- ✓ road passes from State Forest into farmland,
- ✓ Roadside vegetation changes from mostly native vegetation to mostly weeds (over a length greater than 500m).

For your first few sheets, when to start a new section will be the most difficult thing to decide.



# 1. Changing Sections

❖ As a general rule, a new section is started when there is a change in the quality of the roadside vegetation, over a distance of 500m or more.



❖ Don't change to a new sheet if there's only a change in native vegetation type. Many wheatbelt roads repeatedly cross a range of vegetation types, which is related to the changes in underlying soil type and topography.

❓ For example, the vegetation may change from Kwongan (scrub) on the sandy lateritic uplands, through woodlands on the fertile red soils, to salt scrub in valleys.

👉 Start a new survey sheet (new section) if there is a change in the quality of the vegetation, but not if it is merely a change in vegetation type.

# 1. Changing Sections

For changes such as these (over a distance greater than 500m), start a new sheet.

- ✓ Width of road reserve
- ✓ Quality of native vegetation
- ✓ Extent/continuity of native vegetation
- ✓ Weeds increase/decrease
- ✓ Adjoining land use changes
- ✓ Presence of a utility

 Use one survey sheet for each section of road.

**If you are unsure, it is better to start a new section than not.**

# 1. Changing Sections



- ❖ Note the odometer reading at change over point, this will give the length of section 1 of the road.
- ❖ Section 2 will continue until another marked change is observed, when section 3 will begin, etc.
- ❖ Number each section on the survey sheet (1,2,3,etc).
- ❖ Occasionally note down the odometer reading for some identifiable point, eg a side road. (This is very useful as an office check on the accuracy of your odometer!)
- ❖ Staple together all sheets pertaining to one particular road.
- ☞ Change to a new sheet when you change roads.

Date 02/12/03  
Observer(s) Kate and Amy  
Road name Warner Rd  
Nearest named place Ferndale  
Direction of travel SW

**Section No.** 1

Starting point intersection of Warner and Foggy Rd

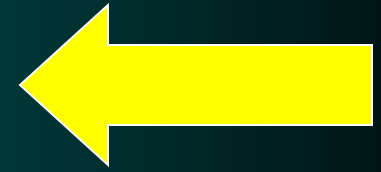
Odometer reading 920.4

Ending point 0.5km past Yellow River Bridge

Odometer reading 924.8

Length of section 4.4 km

## Section One



## Section Two



Date 02/12/03

Observer(s) Kate and Amy

Road name Warner Rd

Nearest named place Ferndale

Direction of travel SW

**Section No.** 2

Starting point 0.5km past Yellow River Bridge

Odometer reading 924.8

Ending point 100m past Google Rd

Odometer reading 926.0

Length of section 1.2 km

**SURVEY TO DETERMINE THE CONSERVATION VALUE OF ROADSIDES**

Roadside Conservation Committee  
C/- Locked Bay 104  
Bentley Delivery Centre 6983

08 9334 0423  
fax 08 9334 0278



Date 10/04/2001  
Observer(s) JEAN & KEU READ  
Road name BESTE RD.  
Shire ESPERANCE  
Nearest named place SALMON GUMS.  
Direction of travel (N,S,E,W) E  
Section no. 1  
Starting point RAILWAY  
odometer reading 347286  
Ending point BURNSIDE ROAD SEA  
odometer reading 347291  
Length of section 5

WIDTH OF ROAD RESERVE (m) ?  
Side of the road (ROAD WIDTH 10M)  
Left Right

WIDTH OF VEGETATED ROADSIDE

1-5 m	<input type="checkbox"/>	<input type="checkbox"/>
5-20 m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
over 20 m	<input type="checkbox"/>	<input type="checkbox"/>

NATIVE VEGETATION ON ROADSIDE

Tree layer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Shrub layer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ground layer	<input type="checkbox"/>	<input type="checkbox"/>

EXTENT OF NATIVE VEGETATION ON ROADSIDE

Less than 20%	<input type="checkbox"/>	<input type="checkbox"/>
20-80%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
over 80%	<input type="checkbox"/>	<input type="checkbox"/>

No. OF DIFFERENT NATIVE PLANT SPECIES

0-5	<input type="checkbox"/>	<input type="checkbox"/>
6-19	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Over 20	<input type="checkbox"/>	<input type="checkbox"/>

Dominant species (if known)  
SALMON GUMS & MALES

DEGREE OF WEED INFESTATION

Few weeds (<20% total plants)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moderate weeds (20-80% total plants)	<input type="checkbox"/>	<input type="checkbox"/>
Mostly weeds (>80% total plants)	<input type="checkbox"/>	<input type="checkbox"/>
Ground layer totally weeds	<input type="checkbox"/>	<input type="checkbox"/>

TYPES OF WEEDS

Victorian Tea-Tree	<input type="checkbox"/>	<input type="checkbox"/>
<20% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
20-80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
>80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>

Boxthorn	<input type="checkbox"/>	<input type="checkbox"/>
<20% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
20-80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
>80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>

Bridal Creeper	<input type="checkbox"/>	<input type="checkbox"/>
<20% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
20-80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
>80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>

Caltrop	<input type="checkbox"/>	<input type="checkbox"/>
<20% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
20-80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
>80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>

Wild Radish	<input type="checkbox"/>	<input type="checkbox"/>
<20% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
20-80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
>80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>

Lovegrass	<input type="checkbox"/>	<input type="checkbox"/>
<20% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
20-80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>
>80% total weeds	<input type="checkbox"/>	<input type="checkbox"/>

Others (state % of weeds)  
MILK THISTLE 5% ONION WEED 50%

FAUNA OBSERVED  
SEVERAL BIRD SPECIES  
MANY FLIES

Rabbits (any evidence)	<input type="checkbox"/>	<input type="checkbox"/>
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VALUE AS A BIOLOGICAL CORRIDOR

Connects uncleared areas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Flowering shrubs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Large trees with hollows	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hollow logs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

PREDOMINANT ADJOINING LANDUSE

Agricultural crop or pasture:	<input type="checkbox"/>	<input type="checkbox"/>
- completely cleared	<input type="checkbox"/>	<input type="checkbox"/>
- scattered	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Uncleared land	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Plantation of non-native trees	<input type="checkbox"/>	<input type="checkbox"/>
Urban or Industrial	<input type="checkbox"/>	<input type="checkbox"/>
Railway Reserve parallel to road	<input type="checkbox"/>	<input type="checkbox"/>
Drain Reserve parallel to road	<input type="checkbox"/>	<input type="checkbox"/>

Other

Utilities/Disturbances

Disturbances continuous	<input type="checkbox"/>	<input type="checkbox"/>
Disturbances isolated	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Disturbances absent	<input type="checkbox"/>	<input type="checkbox"/>

Type  
SOME TRACKS

Conservation Value

High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Medium	<input type="checkbox"/>	<input type="checkbox"/>
Low	<input type="checkbox"/>	<input type="checkbox"/>

Reasons  
NATURE RESERVE TO NORTH

Landscape Value

High	<input type="checkbox"/>	<input type="checkbox"/>
Medium	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Low	<input type="checkbox"/>	<input type="checkbox"/>

Avenue of trees

Reasons

GENERAL COMMENTS  
NICE WOODLAND.

OFFICE USE ONLY

Conservation value score 8 9

## 2. Width of Road Reserve

Historically, road widths were measured in chains (approx 20m). Early roads were usually one chain wide, or a multiple of this. Road reserve widths are therefore normally 20, 40, 60 or 100m wide.

❖ With a little practice, it is easy in agricultural regions to recognise these, as fences delineate the edges of the road reserve. However, in uncleared land, such as forest, it may be difficult to tell on the ground where the road reserve stops and the forest starts. In this case write “unknown”.

 WIDTH OF ROAD RESERVE (m) 20 m





# 3. Width of Vegetated Roadside

This is a measure of how much vegetation/land is left along the roadside. Again, with practice, it is easy to recognise the width categories.

❖ Ignore this section where the road passes through unfenced land such as National Park, State Forest, etc.

## WIDTH OF VEGETATED ROADSIDE

Side of the road	Left	Right
1-5 m	<input type="checkbox"/>	<input type="checkbox"/>
5-20 m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
over 20 m	<input type="checkbox"/>	<input type="checkbox"/>



# 4. Native Vegetation on Roadsides

Undisturbed native vegetation in WA either forms Forest, Woodland, Mallee, Kwongan (scrub or sand plain) or Grassland.

Most formations have more than one layer. For example, woodland has not only trees, but also a scrub layer and a ground layer that contains such plants as reeds, everlastings and orchids.

If one or more of the expected layers is missing, the conservation value of the area is reduced. In the wheatbelt, for example, roadside woodland is often represented only by trees and introduced grasses forming the ground layer.

## NATIVE VEGETATION ON ROADSIDE

Tree layer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shrub layer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ground layer	<input checked="" type="checkbox"/>	<input type="checkbox"/>



# 5. Extent of Native Vegetation

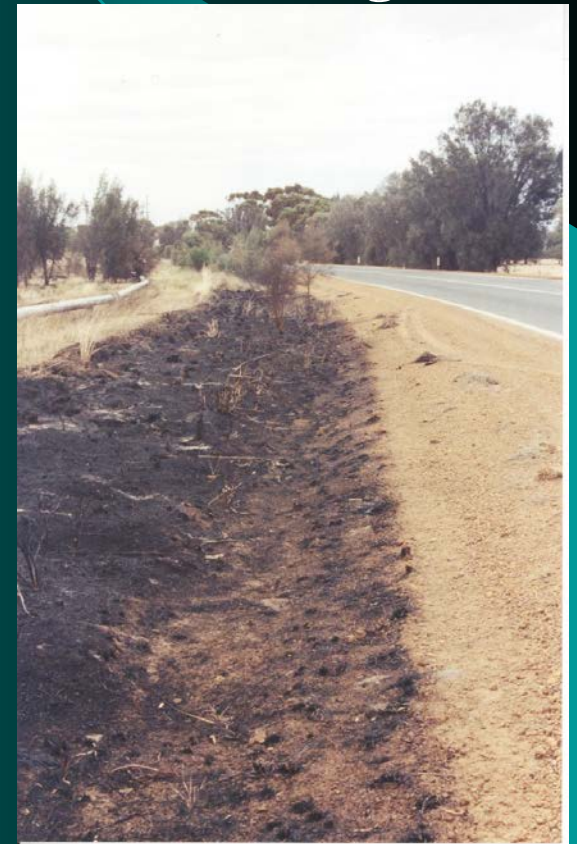
This is a measure of the continuity of native vegetation along the roadside.

❖ Note whether the native vegetation is continuous along the road section, or interrupted by weeds or other disturbances (e.g., fire).



## EXTENT OF NATIVE VEGETATION ON ROADSIDE

Less than 20%  
20 -80%  
over 80%



# 6. Number of Native Species

This is a measure of the diversity of the vegetation and so of its conservation value.

- ❖ Make an average estimate over a 100m length of roadside. It does not have to be done in detail.
- ❖ Please do not list dominant species unless you are sure of your identification (common names will do).




## NO OF DIFFERENT NATIVE SPECIES

0 -5	<input type="checkbox"/>	<input type="checkbox"/>
6 -19	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OVER 20	<input type="checkbox"/>	<input type="checkbox"/>



# 7. Fauna Observed



 Record any native birds, reptiles, mammals, etc seen whilst on the road. Brief notes only please.

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# 8. Value As a Biological Corridor



In cleared areas, the road reserve can be very important as a corridor, allowing the movement of fauna – especially birds – enabling them to seek out feeding and nesting areas.

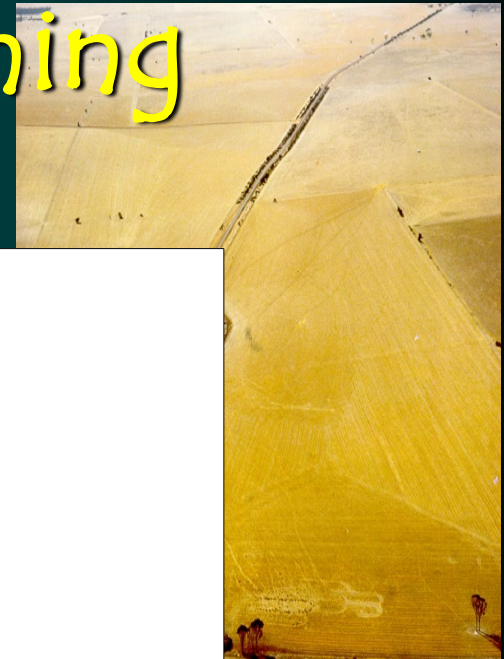
❖ It is important to know if such corridors link remnants of bush.



## VALUE AS A BIOLOGICAL CORRIDOR

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| Connects uncleared areas | <input type="checkbox"/> | <input type="checkbox"/> |
| Flowering shrubs         | <input type="checkbox"/> | <input type="checkbox"/> |
| Large trees with hollows | <input type="checkbox"/> | <input type="checkbox"/> |
| Hollow logs              | <input type="checkbox"/> | <input type="checkbox"/> |

# 9. Predominant Adjoining Landuse



❖ The r  
area wh  
in an ot

❖ Where  
Nature I  
and the

❖ Throu  
to excl  
consider

❖ When considering changing sections, ignore small land use changes (i.e. less than 500m long).

# 9. Predominant Adjoining Landuse



## PREDOMINANT ADJOINING LAND USE

Agricultural crop or pasture

- completely cleared

- scattered

Uncleared land

Plantation of non-native trees

Urban or industrial

Railway Reserve parallel to road

Drain Reserve parallel to road

Other \_\_\_\_\_



# 9. Predominant Adjoining Landuse



scattered



plantation  
non- native



completely cleared

# 10. Utilities and Disturbances

❖ The road reserve is often used as a site to locate public service utilities. Electricity, telegraph lines and water pipelines are often built on the roadside. To construct and maintain them native vegetation may be destroyed and so their presence is often detrimental to the conservation value of the roadside.

❖ Vegetation may be disturbed or destroyed in discrete areas for other reasons, such as gravel or sand quarry, metal dumps, hard standing for machinery parking, or ploughed to act as a firebreak. This not only destroys native vegetation but provides a good habitat for weed growth.

❖ Ignore disturbances if they are not obvious



## UTILITIES/ DISTURBANCES

<b>Disturbances continuous</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Disturbances isolated</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Disturbances absent</b>	<input type="checkbox"/>	<input type="checkbox"/>

Type \_\_\_\_\_

# 11. Weeds

Estimate an average of weediness over the section being considered. It should be estimated as a percentage of total plants along the section.



>80% total plants



❖ On some roadsides, especially those with York Gum and Jam, there may be good tree and shrub cover but the ground layer is totally weeds. Please note this.



20-80% total plants





# WEEDS

- |                               |                          |                          |
|-------------------------------|--------------------------|--------------------------|
| Few weeds (<20% total plants) | <input type="checkbox"/> | <input type="checkbox"/> |
| Half weeds (20 - 80% total)   | <input type="checkbox"/> | <input type="checkbox"/> |
| Mostly weeds (>80% total)     | <input type="checkbox"/> | <input type="checkbox"/> |
| Ground layer totally weeds    | <input type="checkbox"/> | <input type="checkbox"/> |

Complete the opposite side of this form to record the 6 nominated weed species present.



# 12. General Comments

You may like to write in here further detail, for example, road intersections, SEA markers, presence of wildlife.



## GENERAL COMMENTS

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# Thank-you...

**For further information please contact**

**Kate Jackson**

**Technical Officer (Mapping)**

**Roadside Conservation Committee**

**Phone: 9334 0174      Fax: 9334 0367**

**E-mail: [katej@calm.wa.gov.au](mailto:katej@calm.wa.gov.au)**