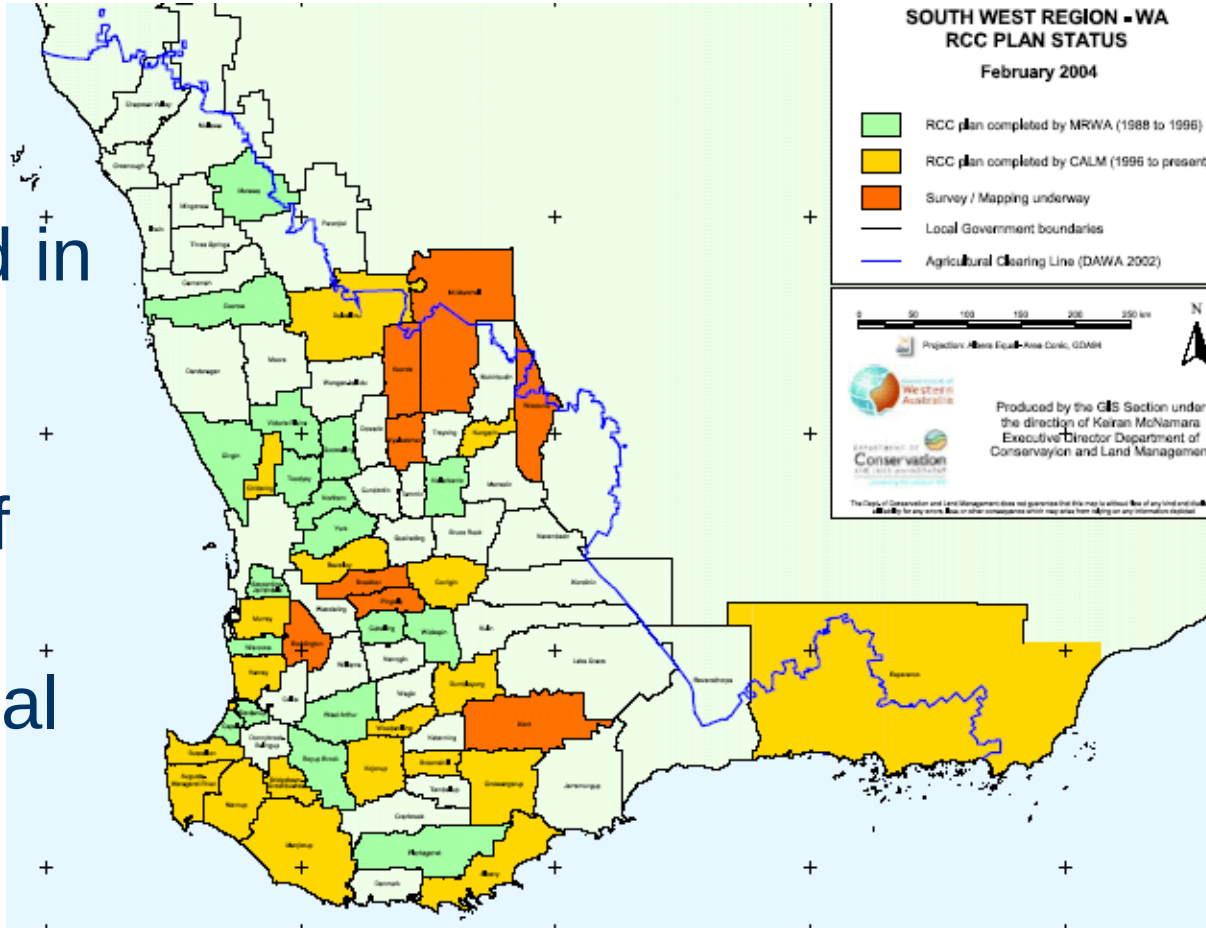
Roadside Survey Training Session

York 2004

The Task Ahead: Roadside Surveys

- Surveys have been completed in 41 shires.
- > 75,000 km of roadsides surveyed by local volunteers.



The Task Ahead: Roadside Surveys

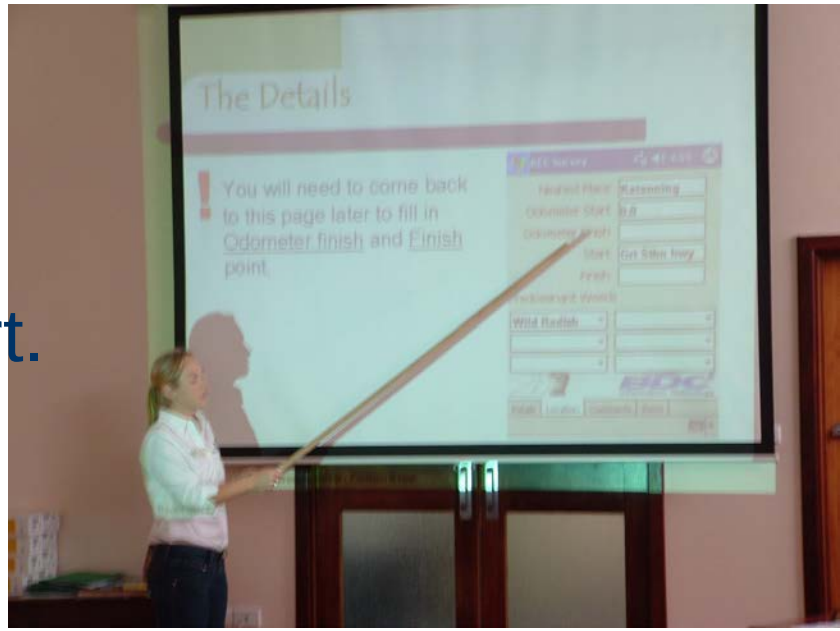
- Roadside surveys are a ‘snap shot’ study of the condition of roadside vegetation.

- Designed to allow people with, or without, botanical knowledge to participate.

- Left and right sides are surveyed independently.

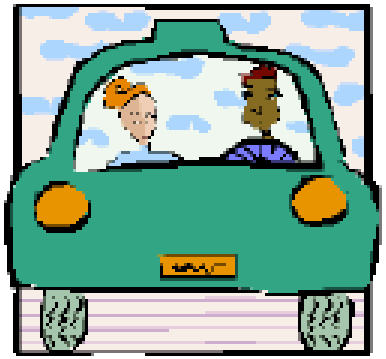
What Is the RCC's Role?

- ✓ provide training session;
- ✓ supply materials and equipment;
- ✓ analyse the survey information;
- ✓ produce the maps and weed overlays; and
- ✓ provide a summary report.



What Is Your Role?

- ✓ attend RCC training session;
- ✓ work in teams of 2-3 people per vehicle;
- ✓ take care of the equipment; and
- ✓ carry out roadside surveys.



Purpose

- ✓ Increase knowledge about, and awareness of, threats to roadside vegetation, and human impacts;
- ✓ Community ownership of map and survey data;
- ✓ ‘Baseline’ data, useful for measuring changes over time.
- ✓ A tool for Planning & Management:

Weed control,	Wildlife corridors,
Road works,	Tourism,
Revegetation,	Funding applications - NRM

Roadside Surveys

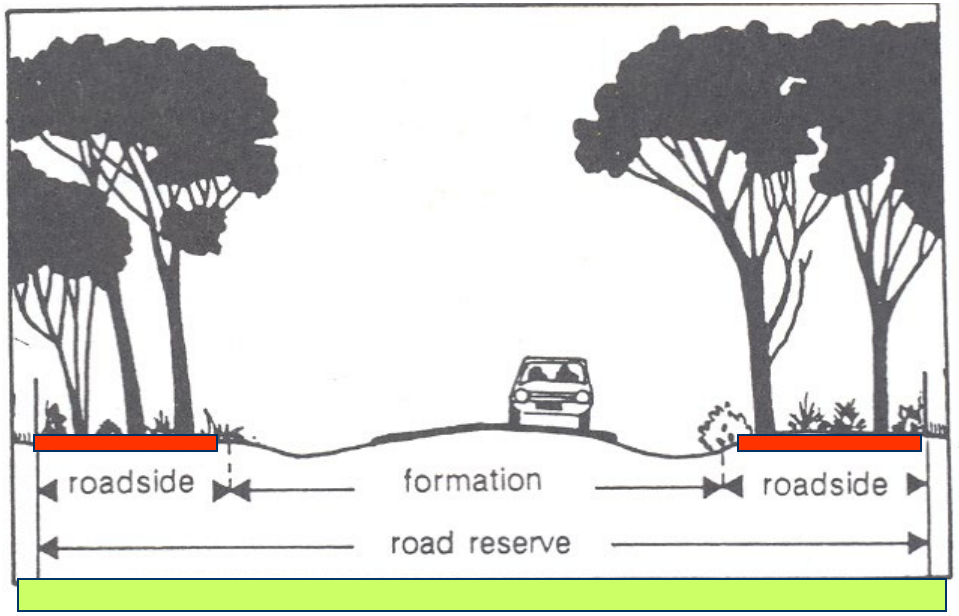
- **Overview**
- **Roadside survey procedure**
- **Roadside attributes and examples**

What is the Roadside?

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

- running surface;
- shoulder;
- drain; and
- batter/back slope.

The remaining space is called the roadside.



The Roadside Survey Is Vehicle 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.

☞ Average survey rate is 15-20km of road per hour.
i.e. 100km of road = 5-6 hours.

Remember SAFETY FIRST when driving slowly or stopping.

Things That You Will Need...

- ✓ A checklist and map of the Shire roads;
- ✓ pens/pencil, highlighter;
- ✓ RCC survey pack:
  - **iPAQ;**
  - **User's Guide;**
  - **Power chargers;**
- ✓ A good sense of direction, you MUST indicate direction of travel and odometer readings.

Make sure you know your left from your right!

Survey Procedure

Survey Procedure

- Always start the survey at an intersection;
- At the start of the road, set your trip meter to 0.0;
- Look at the roadside in front of you. Fill in the general details (road name, direction, width of road reserve, adjoining land use);
- Drive slowly along the road, start filling in the 'items' for left and right hand sides (more about these later);
- Continue driving until there is a significant change or until the road ends.

Changing Sections

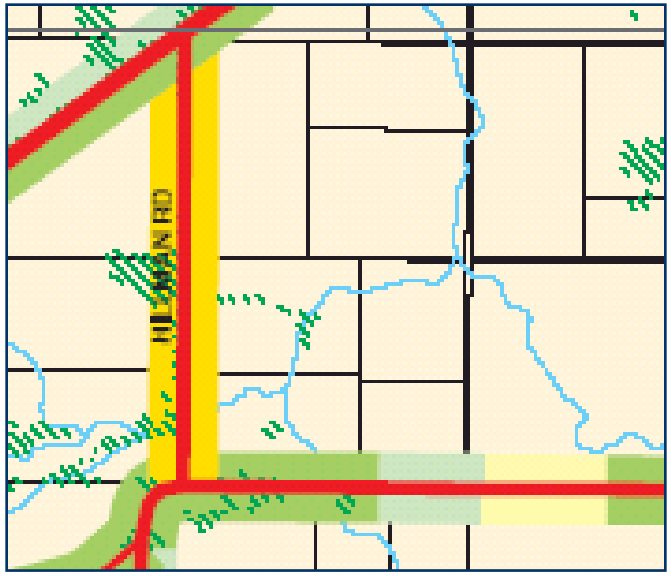
Some roadsides may be uniform along their length, and so can be surveyed as *one section* from start to finish.

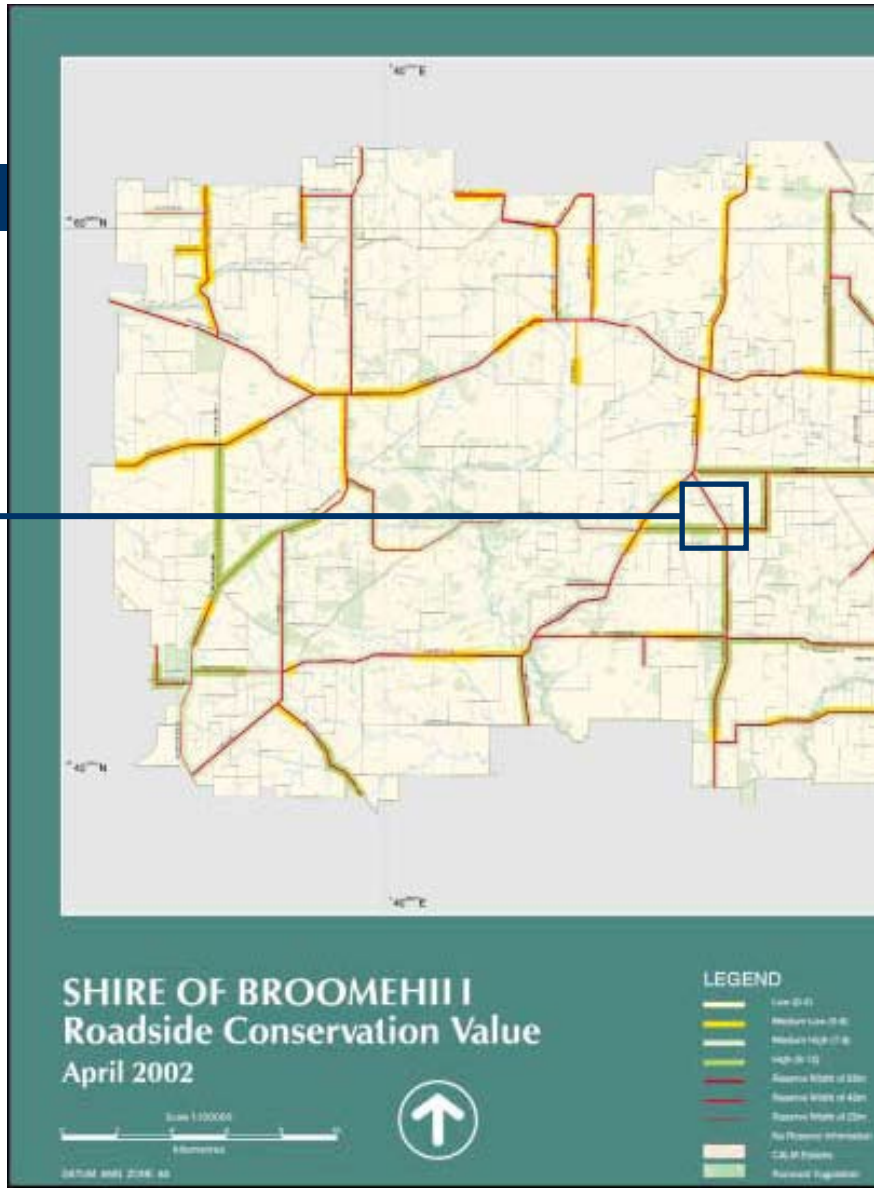
Other roadsides may be quite changeable, for example:

- ✓road reserve <u>width</u> change, eg. from 20m to 60m;
- ✓adjoining <u>land use</u> change, eg. from Nature reserve to farmland;
- ✓<u>quality</u> of roadside vegetation changes, eg. from mostly native to mostly weeds.

Ignore small changes, i.e. less than 200m along the roadside.

Changing Sections





The colour (conservation value) changes along this road. Each coloured ‘section’ reflects the change in surveys.

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 200m or more.
- The change may occur on only one side of the road or both sides.

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

Survey Procedure

- 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.
- Each subsequent section is numbered accordingly (1,2,3,4 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!)

Quick Refresher...

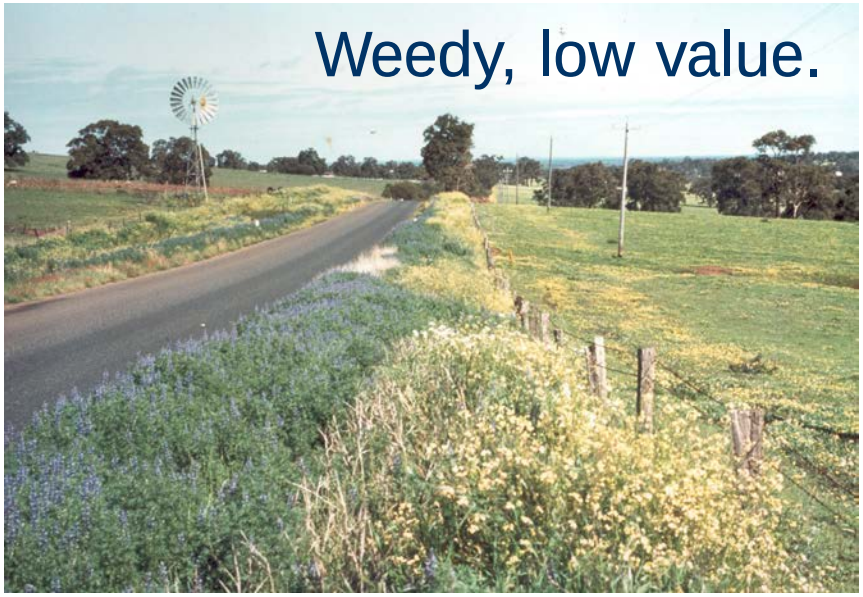
1. Would you change sections if the width of the roadside changed?
2. Changes under ?? metres should be ignored?
3. Do you start a new section if the 'change' only happens on one side of the road?

Roadside Surveys

The information you record will tell us whether the roadside is:

Natural, high value.

Weedy, low value.



10 Characteristics ...

- Width of road reserve;
- Width of vegetation on left and right sides;
- Structure of native vegetation;
- Extent of native vegetation;
- Number of native plant species;
- Value as a biological corridor;
- Degree of weed infestation;
- Nominated weeds;
- Adjoining land use;
- Presence of utility (eg. water, power)

Width of Road Reserve

Historically, road widths were measured in chains (20.1m).
Select the width of the road reserve (is it 20, 40, 60, 80 or 100m wide?).

Native Vegetation on Roadsides

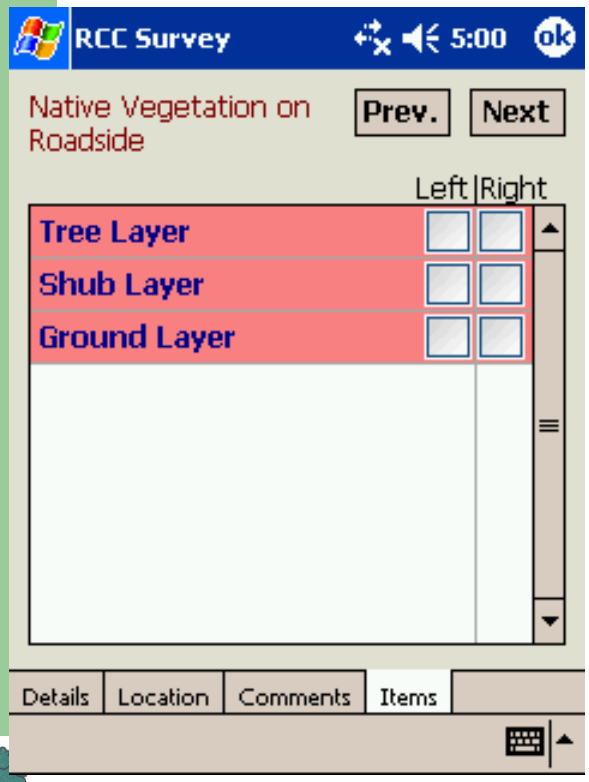
Most native vegetation types have more than one layer.

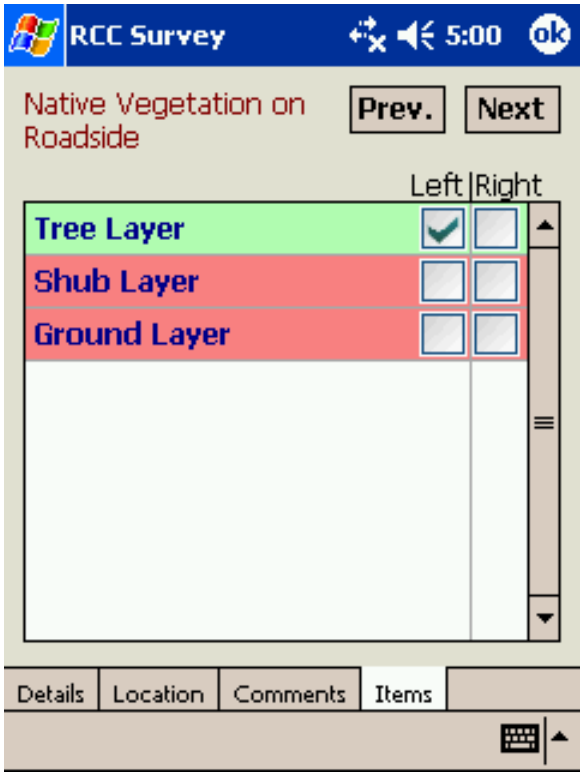
Eg, Woodlands have trees, a scrub layer & a ground layer containing reeds, everlastings and orchids.

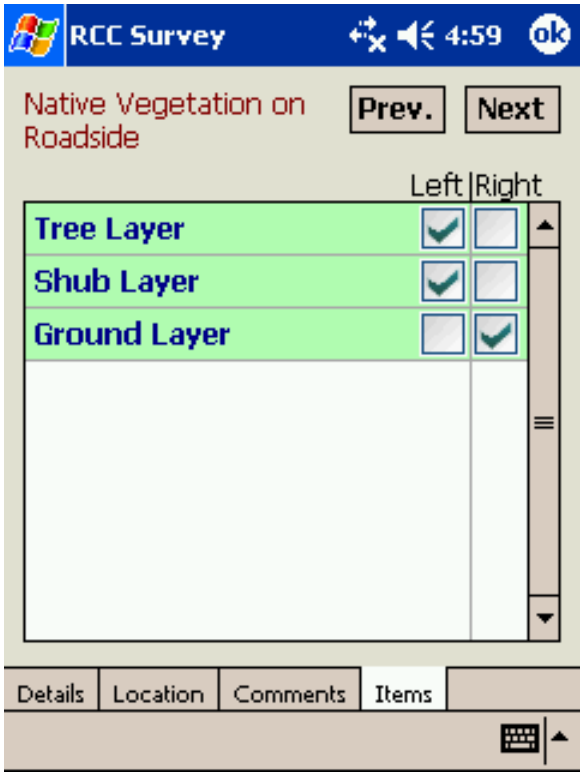
If one or more of the layers is missing, the conservation value of the area is reduced.

Native Vegetation on Roadsides

Indicate whether the roadside vegetation contains a tree, shrub and/or ground layer.







Extent of Native Vegetation

A measure of the continuity of native vegetation along the roadside.

Is the native vegetation continuous along the road section, or interrupted by weeds or other disturbances (e.g, fire, machinery).

EXTENT OF NATIVE VEGETATION ON ROADSIDE

	Left	Right
Less than 20%	☐ ✓	☐
20 -80%	☐	☐ ✓
over 80%	☐	☐

Number of Native Species

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

Make an average estimate length of roadside. It does not have to be done in detail.

NO. OF NATIVE SPECIES	Left	Right
0 -5	☐ ✓	☐ ✓
6 -19	☐	☐
0VER 20	☐	☐

Weeds

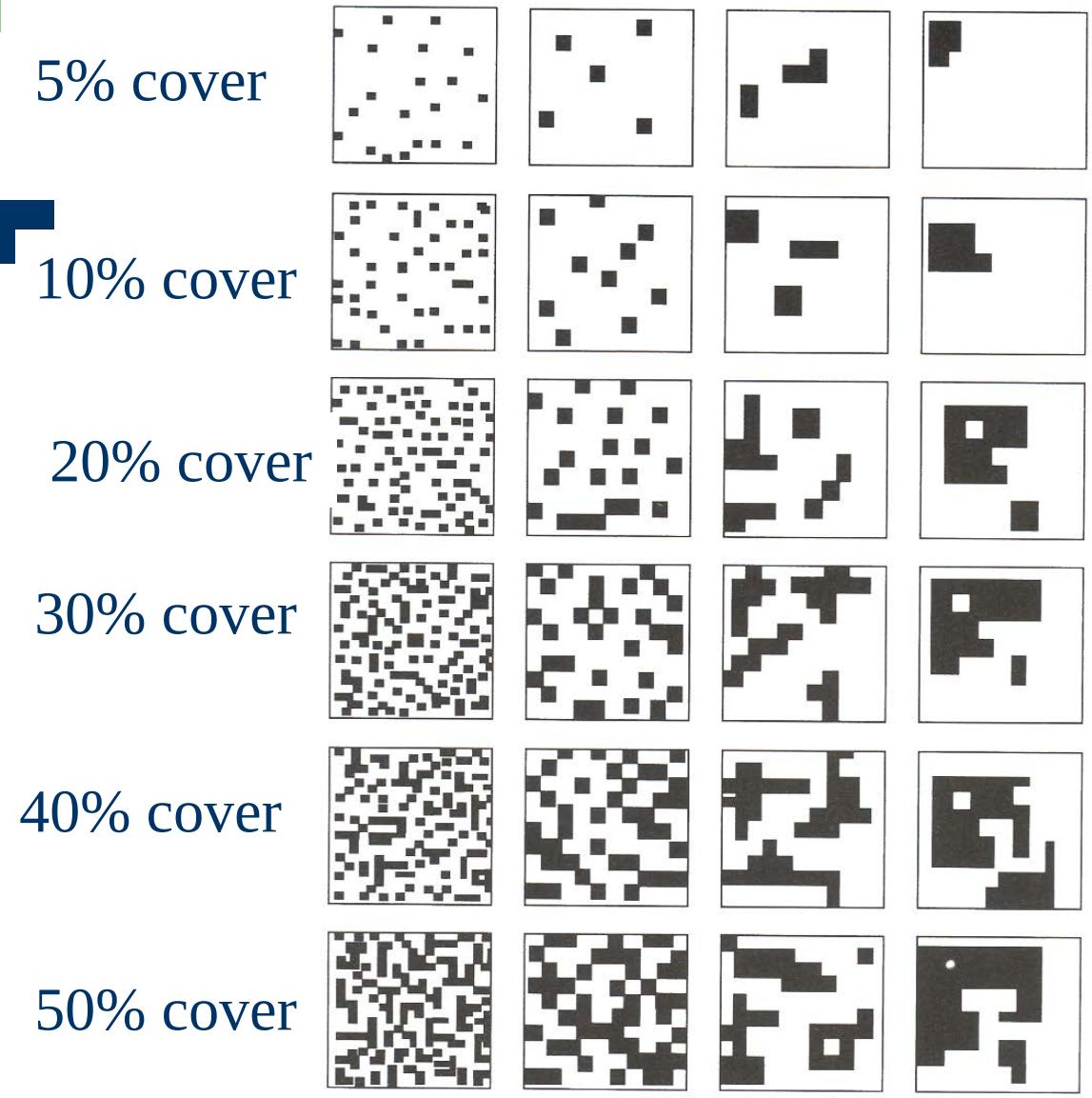
Estimate an average of weediness over the section being considered. It should be estimated as a percentage of total plants along the section.

On some roadsides, there may be good tree and shrub cover but the ground layer is totally weeds. Please note this.

RIGHT: >80% total plants are weeds

Weeds

Weeds may be clumped, or spread out, but the % cover is still the same.



Bayley, D (2001) Efficient Weed Management. NSW Agriculture Paterson NSW.

LEFT:Ground layer totally weeds

WEEDS

	Left	Right
Few weeds (<20% total plants)	☐	☐
Half weeds (20 - 80% total)	☐	☐
Mostly weeds (>80% total)	☐	☐
Ground layer totally weeds	☑	☑

Roadside Conservation Committee

Nominated Weeds

- Roadside populations of these 5 nominated weeds appear as weed-map overlays;
  - African lovegrass;
  - Cape Tulip;
  - Paterson's curse;
  - Wild Radish; and
  - Capeweed.

Weed I.d. sheets are in clip-boards with iPAQ's.

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.

VALUE AS A BIOLOGICAL CORRIDOR

	Left	Right
Connects uncleared areas	☐	☐
Flowering shrubs	☐	☐
Large trees with hollows	☐	☐
Hollow logs	☐	☐

Utilities

- Electricity, telegraph lines and water pipelines are often built on the roadside.
- To construct and maintain them, the roadside vegetation may be destroyed and so their presence may be detrimental.

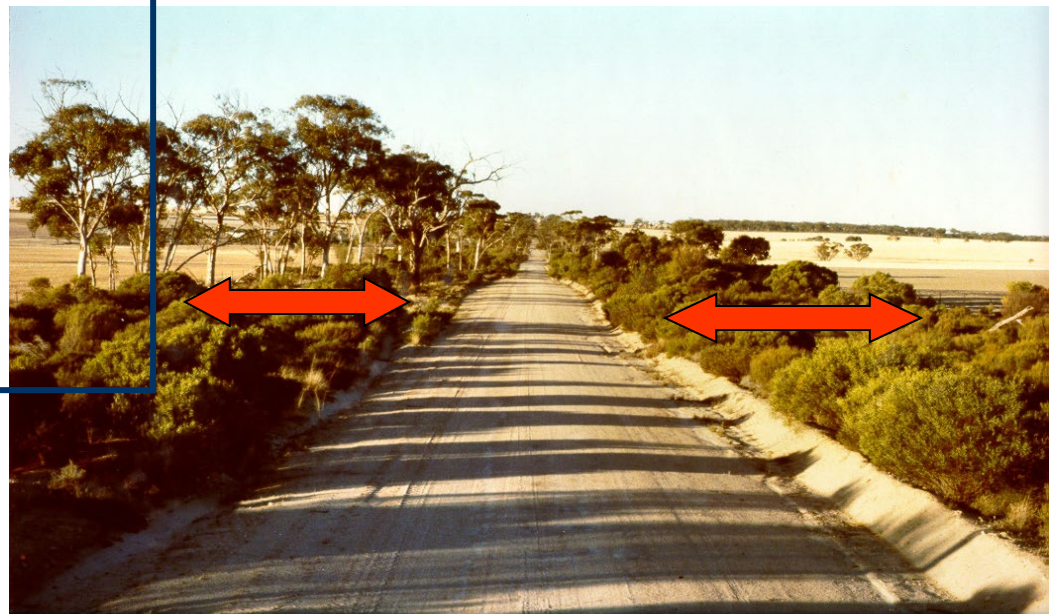
	UTILITIES	
	Left	Right
Utility Absent	☐	☐
Utility Present	☐	☐
Water	☐	☐
Electricity	☐	☐
Gas	☐	☐
Telecomm.	☐	☐

Width of Vegetated Roadside

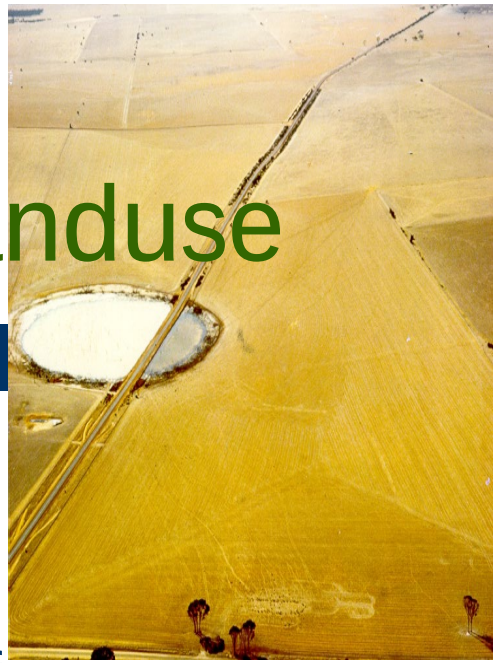
This is a measure of how much vegetation/land is left along the roadside. Again, with practice, it is easy to recognise the width categories.

WIDTH OF VEGETATION ON ROADSIDE

	Left	Right
1-5 m	☐ ✓	☐ ✓
5-20 m	☐	☐
over 20 m	☐	☐



Predominant Adjoining Landuse



The road reserve is most valuable as a conservation area where it is a corridor of remnant vegetation in an otherwise cleared landscape.

•When considering changing sections, ignore small land use changes (i.e. less than 200m).

Adjoining Landuse

ADJOINING LAND USE

	Left	Right
Agricultural crop or pasture		
- completely cleared	☐	☐
- scattered	☐	☐
Uncleared land	☑	☐
Plantation of non-native trees	☐	☐
Urban or industrial	☐	☐
Railway Reserve	☐	☐
Drain Reserve	☐	☐
Other	☐	☐

Predominant Adjoining Landuse

scattered

plantation
non- native

completely cleared

Roadside Surveys

- **Using the RCC Survey Equipment (iPAQs)**

Getting Acquainted...

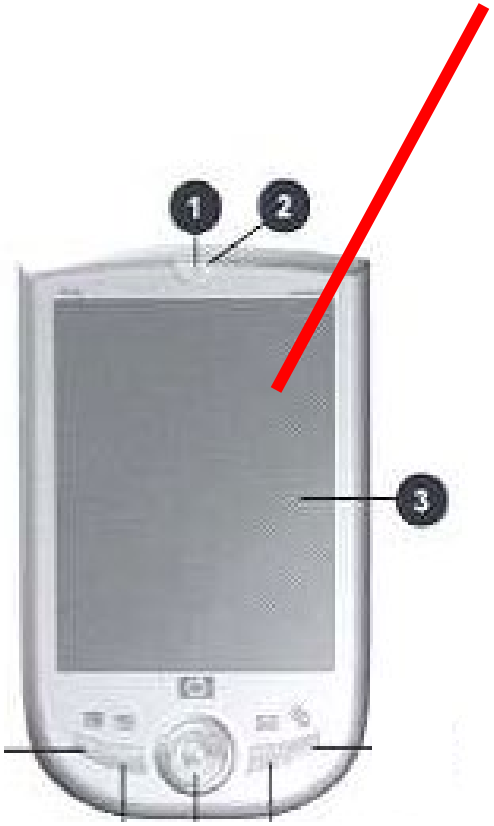
- You will be using a hand-held computer, called an iPAQ.

Getting Acquainted…

1. **Power:** press to turn power on or off. Press and hold to turn screen on or off.
2. amber flash= battery charging;
   amber solid= battery charged.
3. **Screen:** the display screen.
4. **Stylus pen:** slide up to remove, slide down to store.

Getting Acquainted...

- Use the stylus to tap or write on the screen.
  - The screen is sensitive, so be careful.
  - Simply ‘tap’ the screen to select or open an item. Tapping is like pressing a keyboard key.



Charging the iPAQ

- Make sure the iPAQ is fully charged before use, and charge again at the end of each day. Approx. 4 hours
- If the battery goes flat, you could lose your work!

Backing Up...

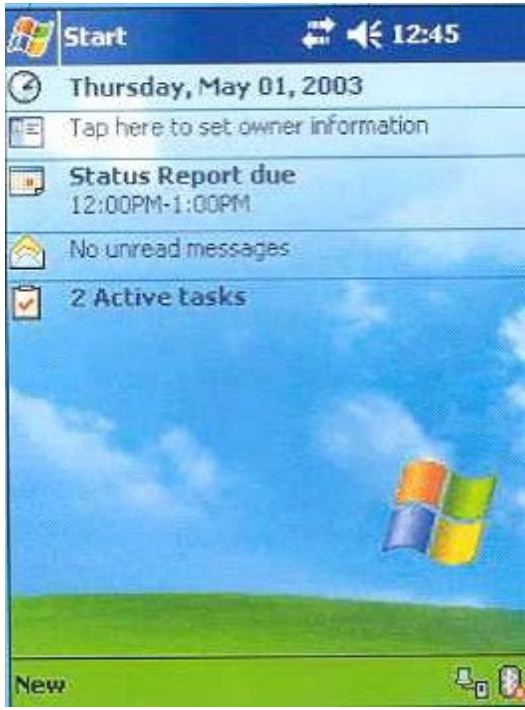
- *Sprite Backup* saves your information onto a memory card daily at 5pm. You will need to tap ‘OK’
- Automatically backs up if battery is low. Press ‘OK’

Getting Started…

1. Turn the iPAQ on;

2. Using the stylus pen, tap the start icon top left corner, next to the word 'Start'. The start menu will drop down.

3. Select '**RCC survey'**. The program may take a few seconds to start up.



Make sure the device is fully charged before use.

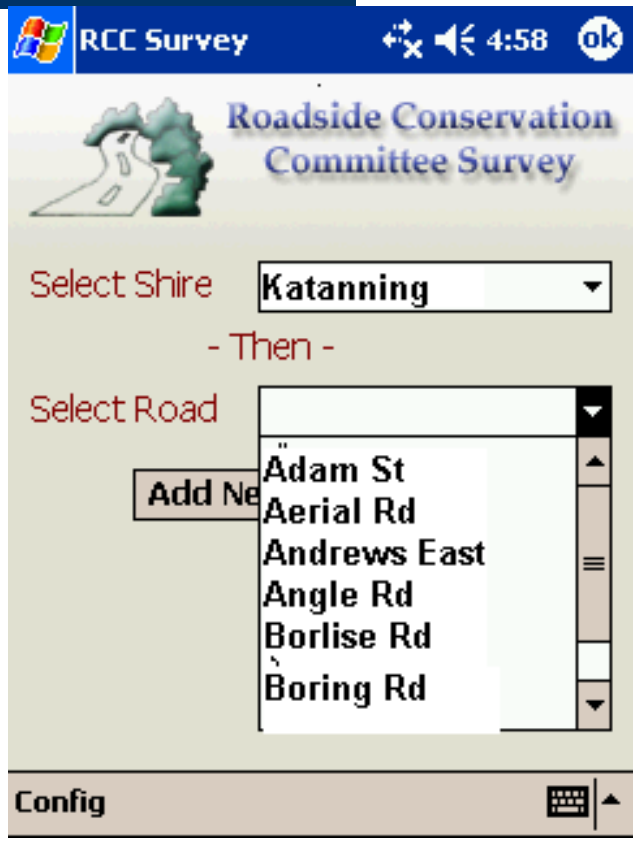
Starting the Survey

1. Select the name of the **Shire** from the drop-down menu;

2. Select the name of the **road** you are going to be surveying. Press **OK**.

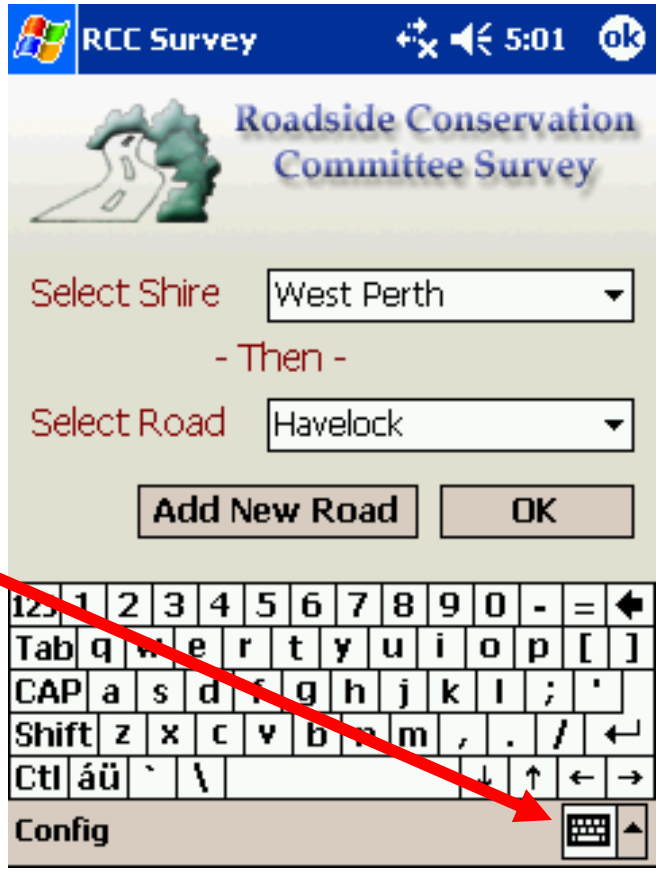
If the road is not listed, select '**Add New Road**'. In the space provided, type the road name. Press **OK**.

3. You are now ready to begin the roadside survey for the selected road.



Starting the Survey

- There is a keyboard you can use for typing in details.
- It is located at the bottom right corner of the screen.



Details

Enter the following information:

- **Section:** the section number (eg 1, 2, or 3, etc);
- **Observer:** your name;
- **Date:** automatically today's date;
- **Width** (m): select from the drop-down menu;
- **Direction:** N, S, E, or W, select from the drop-down menu.

Go to the next tab, named **Location**.

Location

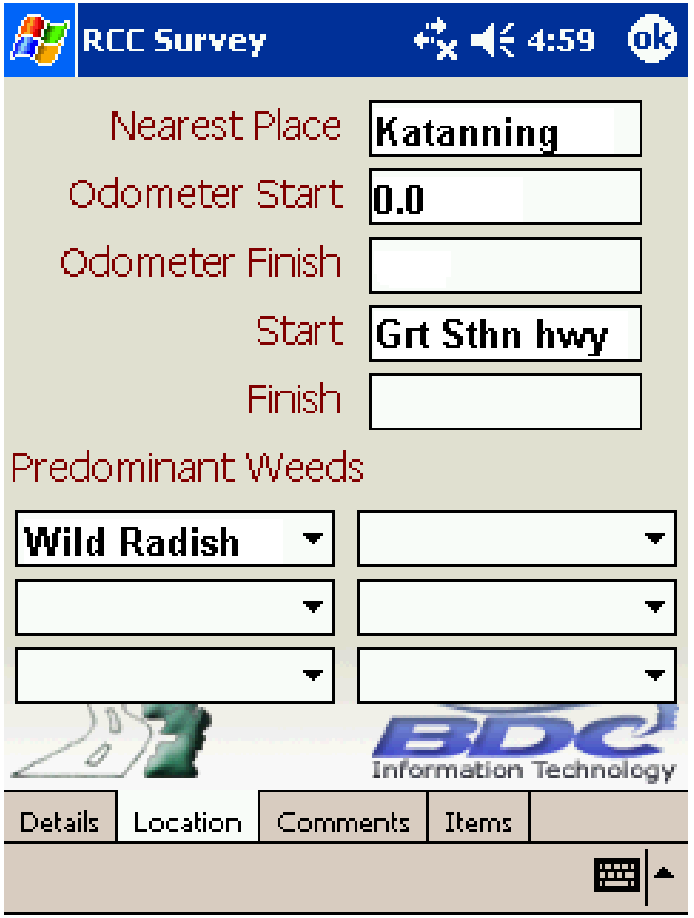
Enter the following details:

- **Nearest Place**: nearest named locality;
- **Odometer Start**: odometer reading when
- you start the section (eg. 0.0);
- **Odometer Finish**: odometer reading when you
- finish the section (eg. 5.6);
- **Start:** a written indication of your start point, eg. Jones Rd.
- **Finish:** a written indication of your finish point, eg. Boundary Rd.
- **Predominant Weeds:** record the presence of pre-determined weed species. Select from drop-down menu. Leave blank if not present.

Location

You will need to come back to this page later to fill in Odometer finish and Finish point.

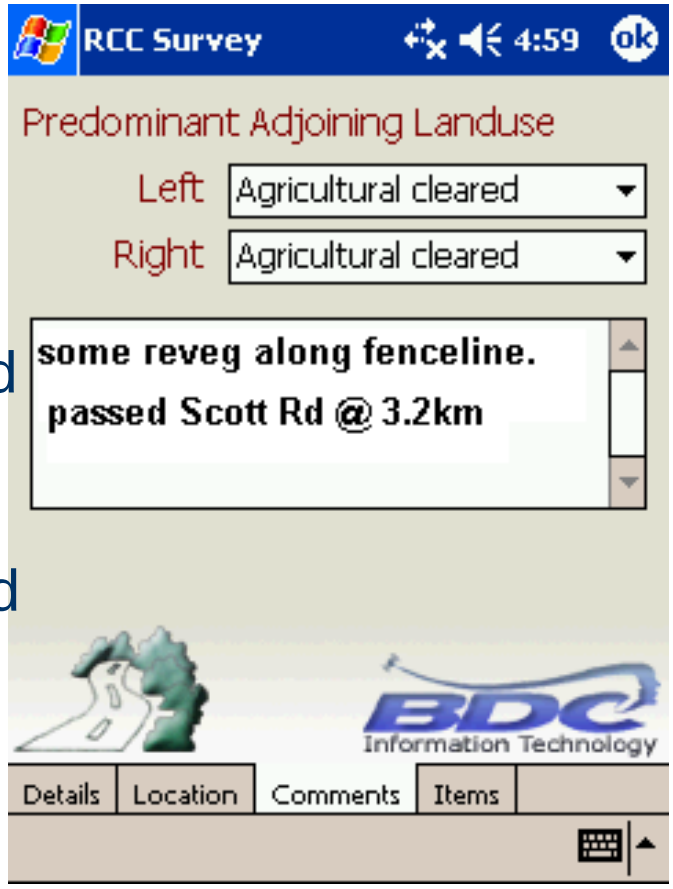
For now, fill in the rest of the information and go to the next tab, **Comments**.



Comments

Record:

- **Predominant adjoining landuse:** select the dominant land use from the drop-down menu (make sure you record both the left and right sides), and
- **Comments:** you may like to enter further details.
- Occasionally note down a side road and the odometer reading. This helps in the GIS map production.



Go to the next tab, named **Items.**

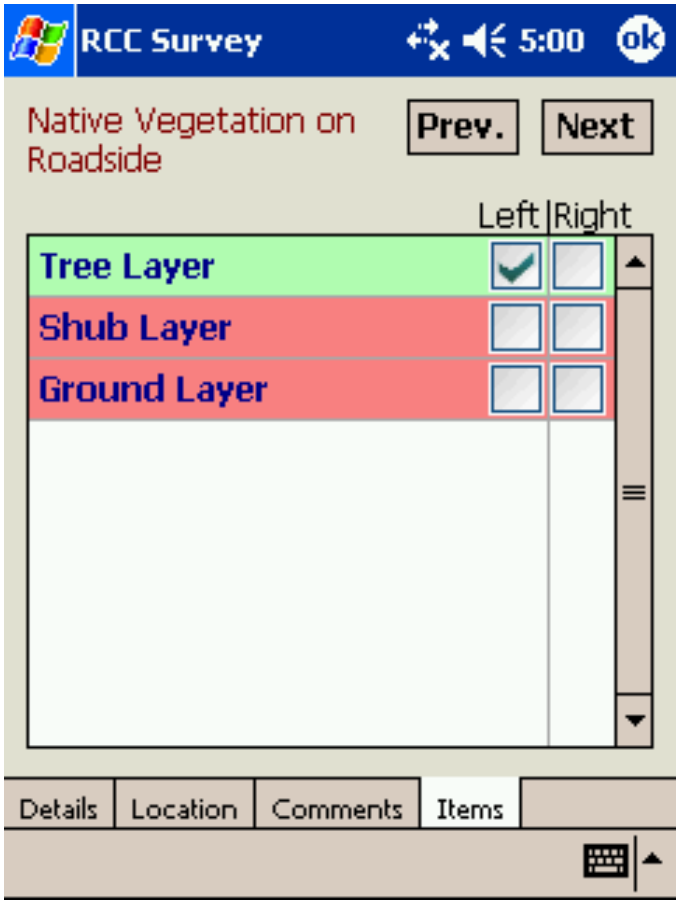
Items

Record the presence or absence of **8 roadside characteristics** that, when combined, make up the roadside conservation value.

Record the left and right sides independently.

The options will change from red to green, indicating that you have made a selection.

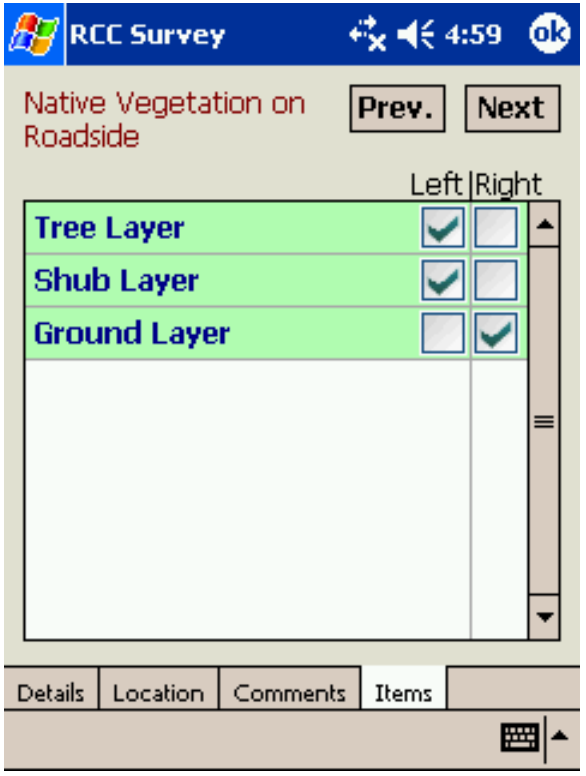
Press **Next.**



Items

Keep filling in the survey, tick the box if present and press ‘Next’.

Finish the other 7 items…



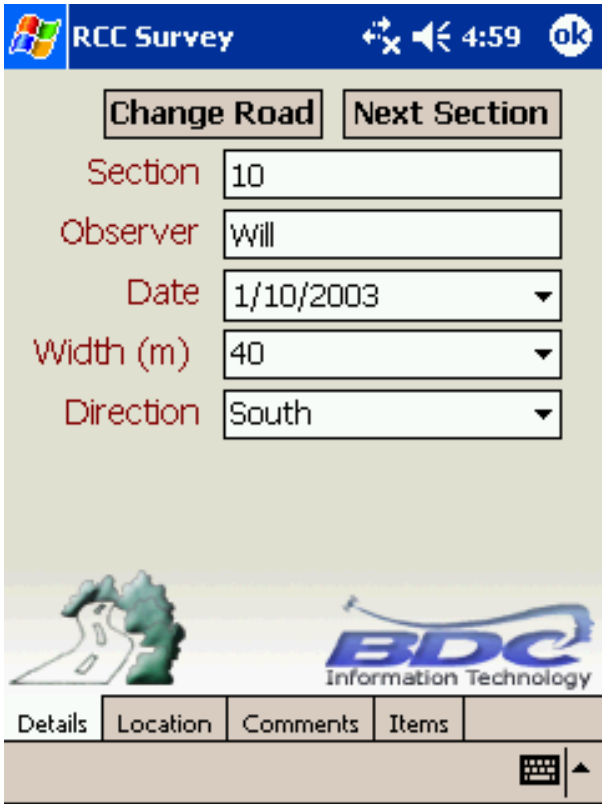
Finishing the Section

- The last items page will be “Finished”. Press **Next**.
- You will receive an error message ‘*Odometer finish cannot be left blank’*, press ‘ok’.
- Continue driving along the road until there is a significant change, or until the road ends.
- When this happens, pull over or slow down, enter the **Odometer Finish** and **Finish** point on the **‘Location’** page.

Finishing the Section

On the **Details** page select:

- **Change Road:** to begin surveying a new road, or
- **Next Section:** if you are still on the same road, and have to start surveying a new section.



Roadside Surveys

- Practical Session- groups of 4 per vehicle;
- Allocate teams to roads;
- Arrange a schedule to share iPAQ's.

Plan the Survey…

- Groups of 4 to go for practice run (20 mins);
- Others plan their survey teams and roads, mark onto a central map, and organise roster for using iPAQ's.

Review

- Survey procedure;
- Roadside survey attributes;
- Survey teams and allocated roads;
- Roster to share iPAQ’s;
- Loan/booking sheets at York Shire office.

Thank-you…

For further information please contact

Kate Jackson

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Roadside Conservation Committee

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