

# Roadside Vegetation Survey in the Shire of Moora



Roadside Conservation Committee

# Roadside Conservation Committee



The RCC is comprised of members representing relevant agencies and the community:

- Local Government Authorities (2 elected members)
- WALGA
- Main Roads
- Department of Parks & Wildlife (formerly Department of Environment & Conservation)
- Department of Agriculture and Food
- Department of Fire and Emergency Services (DFES)
- Brookfield Rail (formerly Westnet Rail)
- Western Power
- ATCO Gas Australia (formerly WA Gas Networks)
- Wildflower Society of Western Australia
- Conservation Council of Western Australia
- Telstra (not currently represented)

**Roadside Conservation Committee**



# Roadside Vegetation Survey Moora 2011 to 2013



Roadside Conservation Committee

# Roadside Surveys

- Determining conservation status
  - Snap-shot study
  - Aim: to assess the conservation values of road-side remnants in Moora
- 
- ✓ Surveys conducted from September 2011 to June 2013
  - ✓ 82% (735km) of the Shire of Moora's 899km of rural roads were mapped.
  - ✓ Assessed by the RCC and maps produced via a Geographic Information System (GIS).



# Roadside Surveys

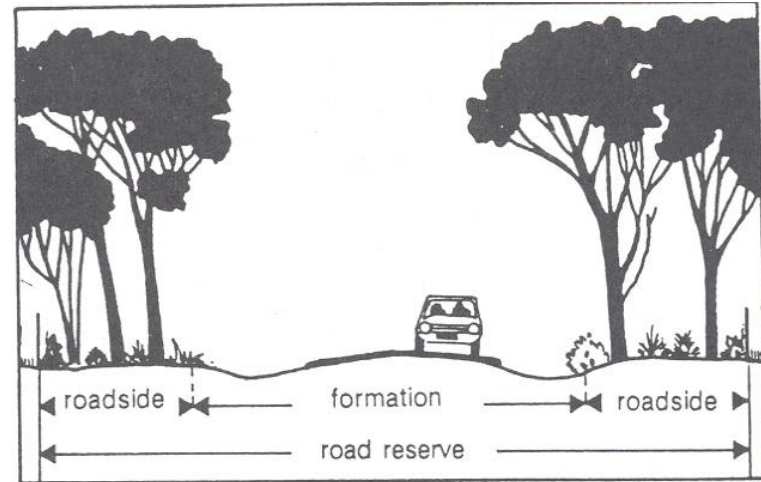
The roadside surveyors were:

- Angela Keamy
- Ann Lewis
- Bev Stirling
- Clive Tonkin
- Edna McLaughlin
- Guy Hicks
- Ingrid Krockenberger
- Joy Fraser
- Julia White
- Kylie Payne
- Lyn Hamilton
- Marie Carter
- Maureen Tonkin
- Pauline Dilley
- Rachel Walmsley
- Renee Ettridge



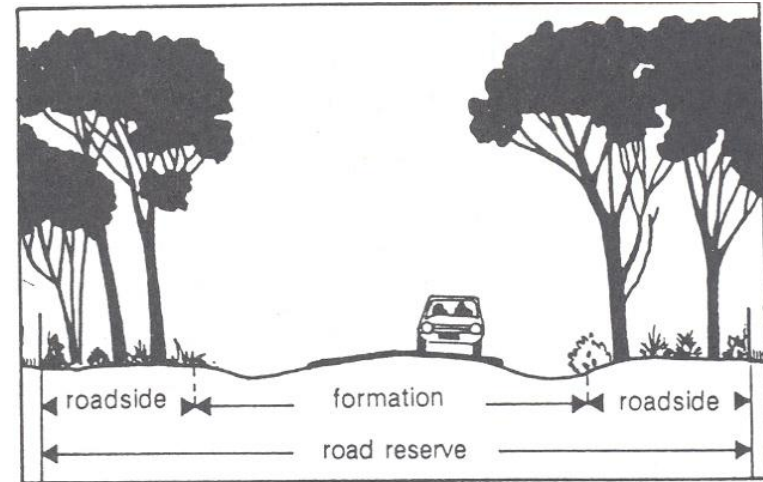
# Roadside Attributes

- width of road reserve
- vegetation type
- tree decline
- environmentally sensitive areas
- revegetation
- clearing
- rabbits
- utilities
- presence and % of 6 chosen weeds
- presence and extent of additional weeds
- adjoining land use
- general comments



# Roadside Attributes - Score

- Width of vegetation
- Structure of native vegetation
- Extent of native vegetation
- Number native plant species
- Degree of weed infestation
- Habitat value



# Roadside Conservation Value

Attributes are generally scored from 0 to 2.

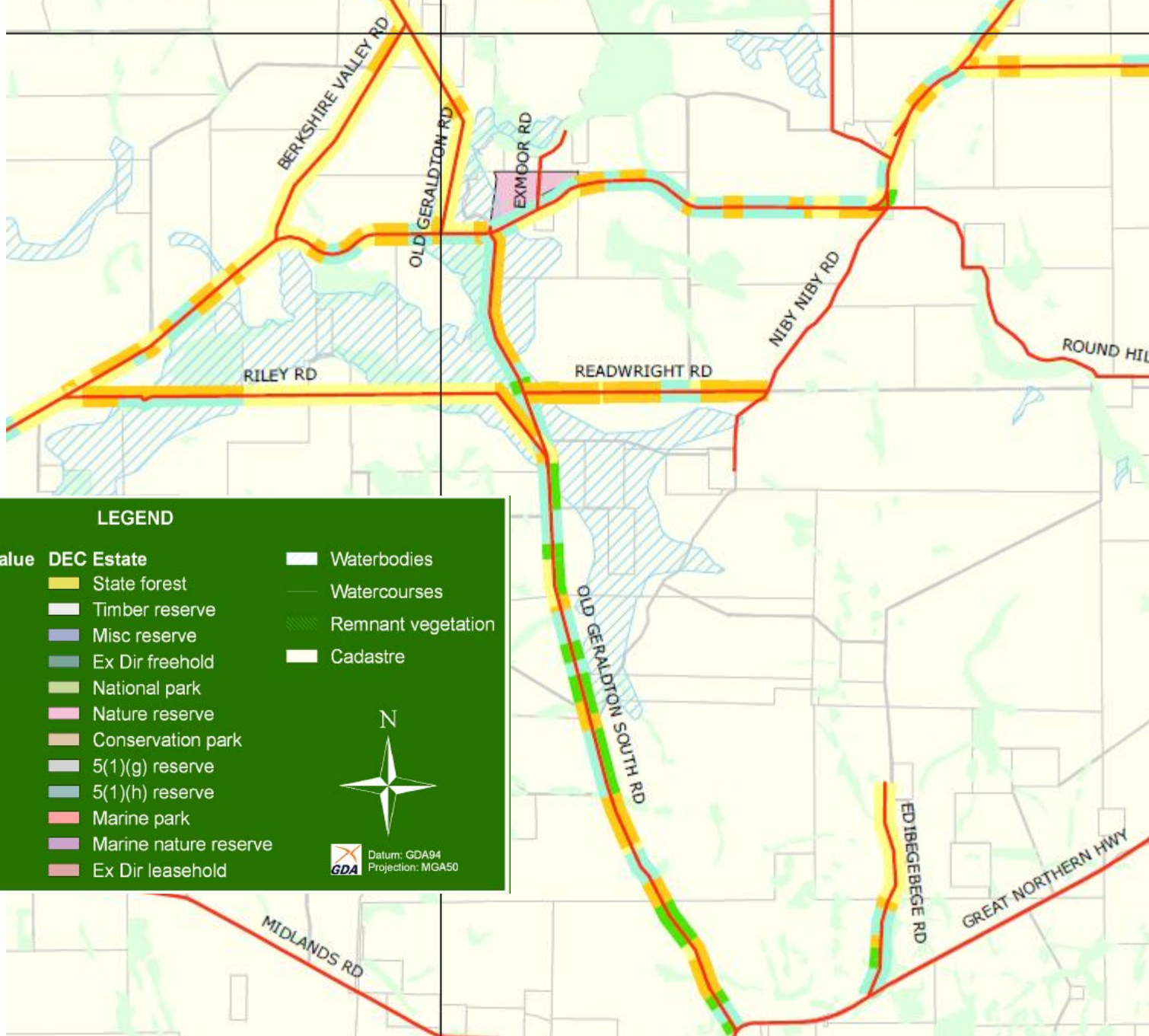
Added together = conservation value score: 0 – 12.

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

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







**LEGEND**

<b>Roadside Conservation Value</b>	<b>DEC Estate</b>	Waterbodies
Low (0-4)	State forest	Watercourses
Medium low (5-6)	Timber reserve	Remnant vegetation
Medium high (7-8)	Misc reserve	Cadastre
High (9-12)	Ex Dir freehold	
	National park	
	Nature reserve	
	Conservation park	
	5(1)(g) reserve	
	5(1)(h) reserve	
	Marine park	
	Marine nature reserve	
	Ex Dir leasehold	

Datum: GDA94  
Projection: MGA50





# Summarised Data sheet

Road Name	Road Number	Section #	OD Start	OD End	Distance	Direction	Intersection		Width of Vegetation		Extent of Vegetation		# of Native Plant Species		General Weeds		Native Vegetation		Habitat Features		Conservation Value Score (0-12)		Dominant Weeds Combined	Additional Weeds Combined	Comments
			(km)	(km)			Start	End	L	R	L	R	L	R	L	R	L	R	L	R	L	R			
Airstrip	5100038	1	0	0.2	0.2	S	Dandaragan Rd		1-5	1-5	1	1	1	1	2	2	2	2	3	3	8	4	AfricanLovegrass Wild_Radish	Lupin Capeweed E_Sts_Eucs	quandong
Airstrip	5100038	2	0.2	0.6	0.4	S			1-5	1-5	0	2	0	2	1	2	1	2	2	3	11	6	AfricanLovegrass Wild_Radish	Capeweed Gazania Soursob E_Sts_Eucs	
Airstrip	5100038	3	0.6	0.9	0.3	S			1-5	1-5	0	1	0	1	1	2	1	2	2	3	9	4	AfricanLovegrass Wild_Radish	Capeweed E_Sts_Eucs Gazania	Sandplain cypress 0.8km
Airstrip	5100038	4	0.9	1.1	0.2	S		Rubbish Tip Rd	1-5	1-5	1	1	1	1	1	2	1	2	2	2	7	4	AfricanLovegrass	E_Sts_Eucs Gazania	Sandplain cypress
Airstrip	5100038	5	1.1	1.3	0.2	S	Rubbish Tip Rd		1-5	1-5	1	1	1	1	1	2	2	2	2	2	10	10	AfricanLovegrass		
Airstrip	5100038	6	1.3	1.9	0.6	S			1-5	1-5	1	1	1	1	2	2	2	2	2	2	10	10	AfricanLovegrass Wild_Radish	Capeweed Ann_Grass	
Airstrip	5100038	7	1.9	2.2	0.3	S			1-5	1-5	1	1	0	0	0	0	2	2	2	2	6	8	AfricanLovegrass Wild_Radish	Capeweed Nightshade Ann_Grass Wild_Oats Sowthistle	
Airstrip	5100038	8	2.2	2.5	0.3	S			1-5	1-5	1	1	0	0	2	2	2	2	2	2	8	8	Wild_Radish	Capeweed Ann_Grass Soursob Stinking Roger	
Airstrip	5100038	9	2.5	2.9	0.4	S			1-5	1-5	1	1	1	0	2	2	2	2	2	2	7	7	Wild_Radish	Capeweed Ann_Grass	gravel pit rhs 2.7km
Airstrip	5100038	10	2.9	3.1	0.2	S			1-5	Unknown	0	1	0	0	2	2	2	2	2	2	8	7	Wild_Radish	Capeweed Ann_Grass Soursob	banksia ground cover
Airstrip	5100038	11	3.1	3.3	0.2	S			1-5	Unknown	0	1	0	0	0	0	2	2	2	3	3	2	Wild_Radish	Ann_Grass Soursob Couch	
Airstrip	5100038	12	3.3	3.7	0.4	S		Webb Moora Rd	1-5	Unknown	1	1	0	1	2	2	2	2	2	3	8	9		Ann_Grass	
Airstrip	5100038	13	3.7	4.1	0.4	S	Webb Moora Rd		1-5	1-5	0	0	0	0	0	0	1	1	2	2	8	5		Ann_Grass Capeweed	Verticordia at 4.1
Airstrip	5100038	14	4.1	4.2	0.1	S			1-5	1-5	1	1	1	1	2	2	2	2	2	2	8	6		Ann_Grass Capeweed	Sandplain cypress 4.2
Airstrip	5100038	15	4.2	4.4	0.2	S			Unknown	1-5	2	2	1	1	2	2	2	2	3	3	7	5		Ann_Grass Capeweed	Sandplain cypress 4.2
Airstrip	5100038	16	4.4	4.5	0.1	S			1-5	1-5	1	0	1	0	2	1	2	2	1	2	1	3		Ann_Grass Capeweed	
Airstrip	5100038	17	4.5	4.7	0.2	S			1-5	1-5	0	0	0	0	0	1	1	1	0	1	8	8			



# The Natural Environment...

- 15.8% native vegetation cover
- 14 Threatened & 8 Priority flora species occur on roadside locations throughout the Shire.
- 25 Threatened & Priority fauna species occur in the Shire.



*Daviesia dielsii*, Diels' daviesia

- Branching shrub
- Grows to 0.5-0.9m high
- Orange and red flowers in July
- Found in sandy, often gravelly soils.

Photo: FloraBase



*Daviesia dielsii*

Photo



Carpet python

Photo: © Babs & Bert Wells/DPaW



Bilby

Photo: © Babs & Bert Wells/DPaW



Carnaby's black-cockatoo

Photo: © Babs & Bert Wells/DPaW



*Hemiandra gardneri*, Red snakebush

- Prostrate, pungent shrub
- Grows to 0.1-0.2m high to 1m wide
- Red/pink flowers in August to October
- Found in grey, yellow or clayey sand.

Photo: FloraBase



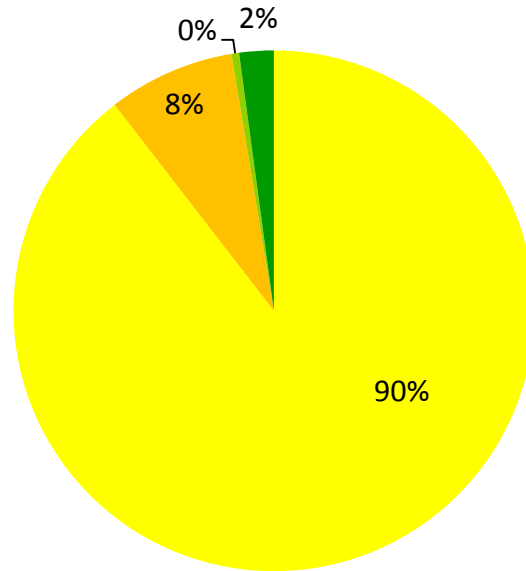
# RESULTS



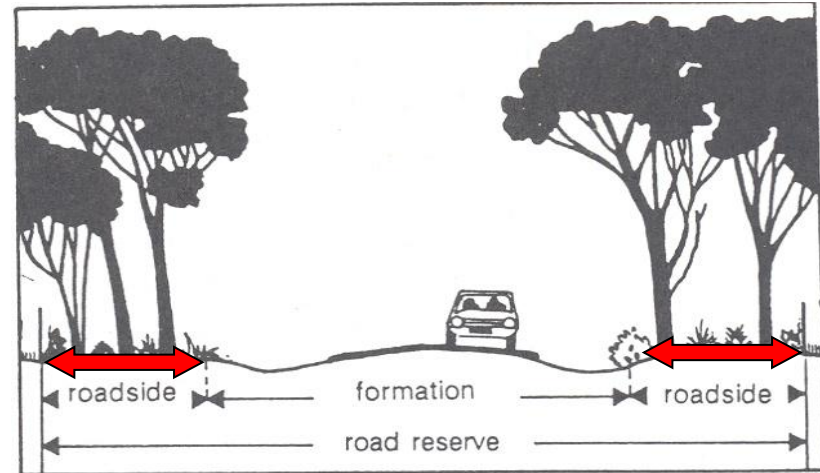
So what did we find?



# Width of Vegetated Roadsides



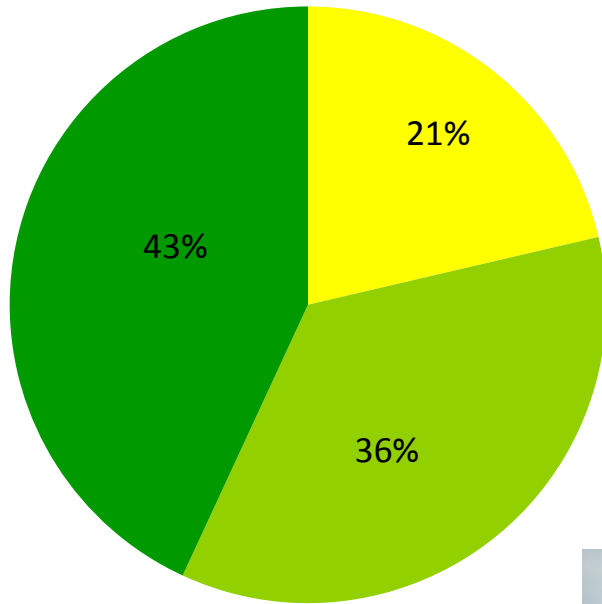
- 1-5m
- 5-20m
- >20m
- Unknown



# Width of Vegetated Roadsides



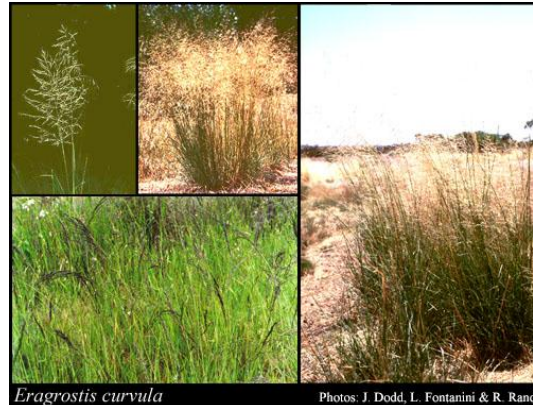
# General Weed Presence



Heavy >70%

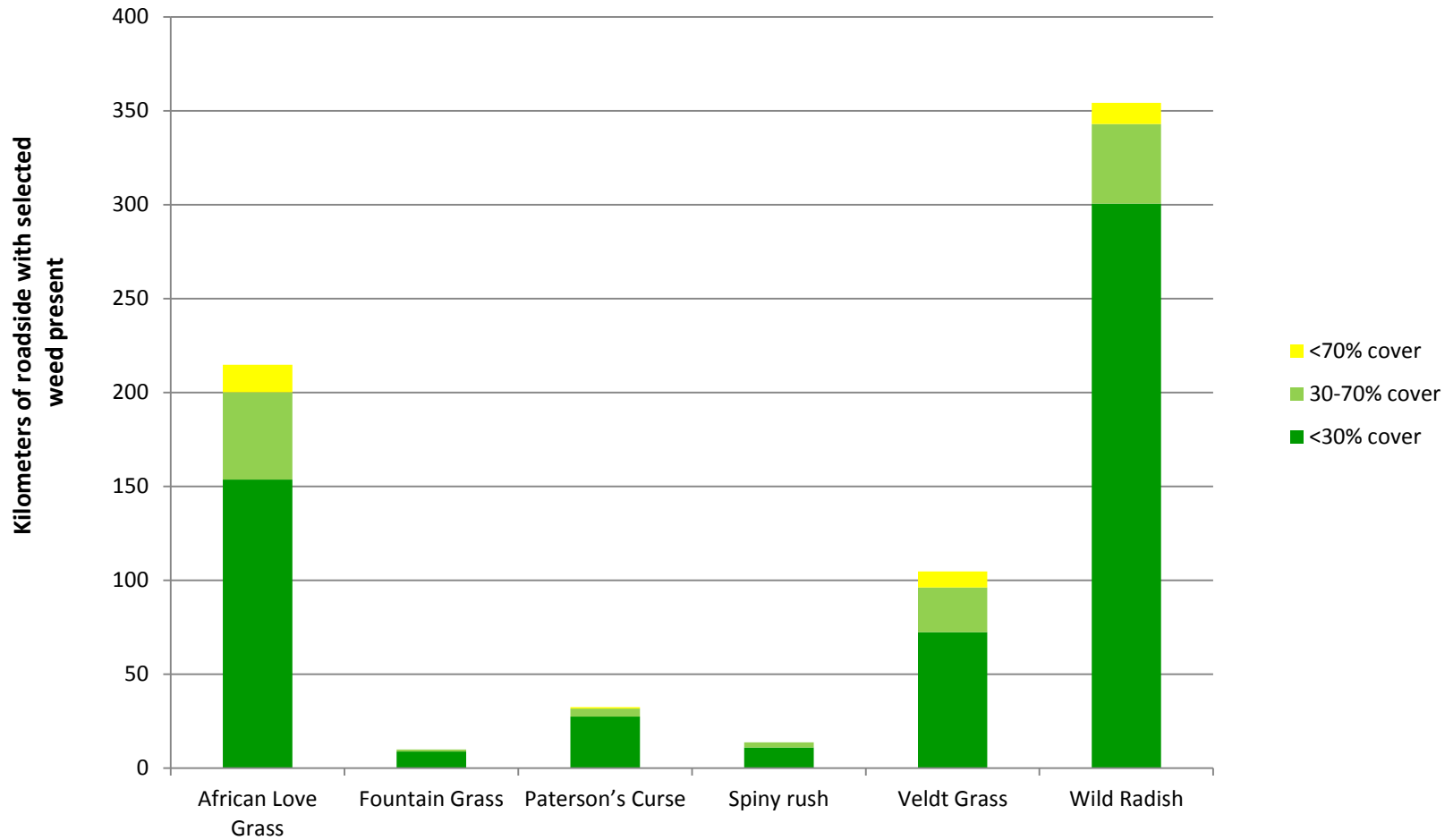
medium 30-70%

light <30%



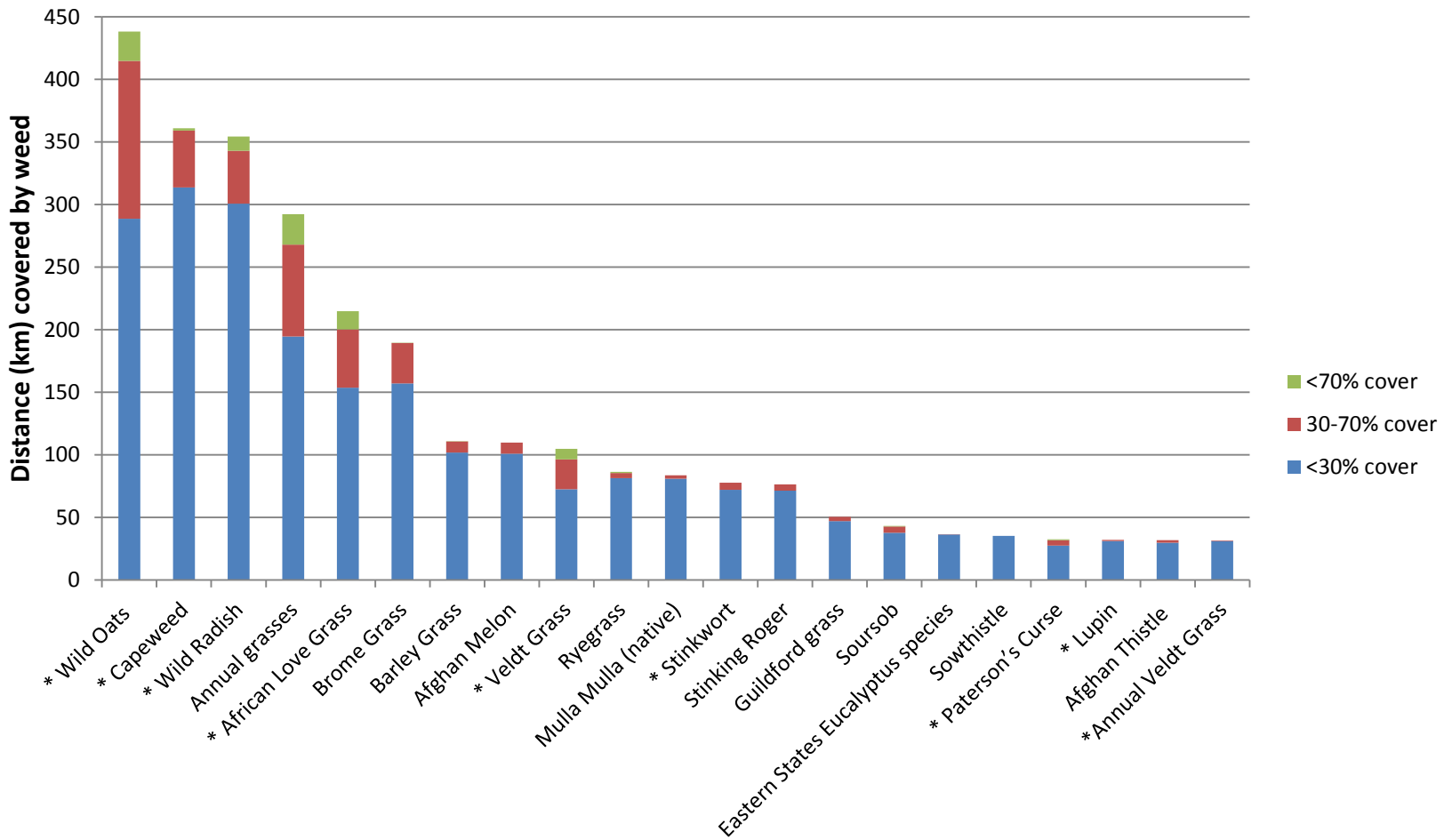


# Nominated Weeds in Roadsides



# Additional Weeds in Roadsides

Extent of additional weeds covering more than 20km of roadside

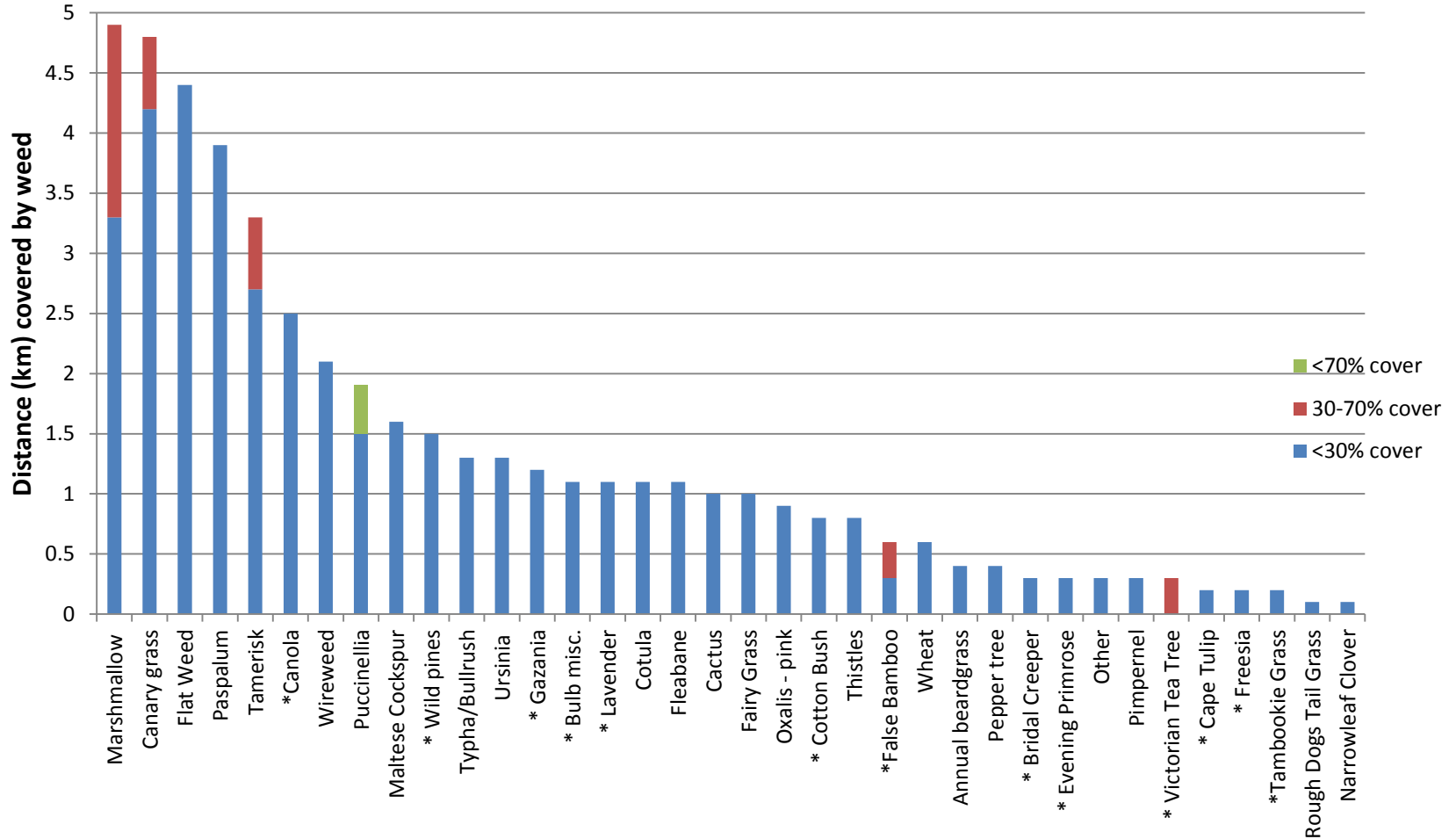


\* On Roadside Conservation Committee - Environmental Roadside Weed List



# Additional Weeds in Roadsides

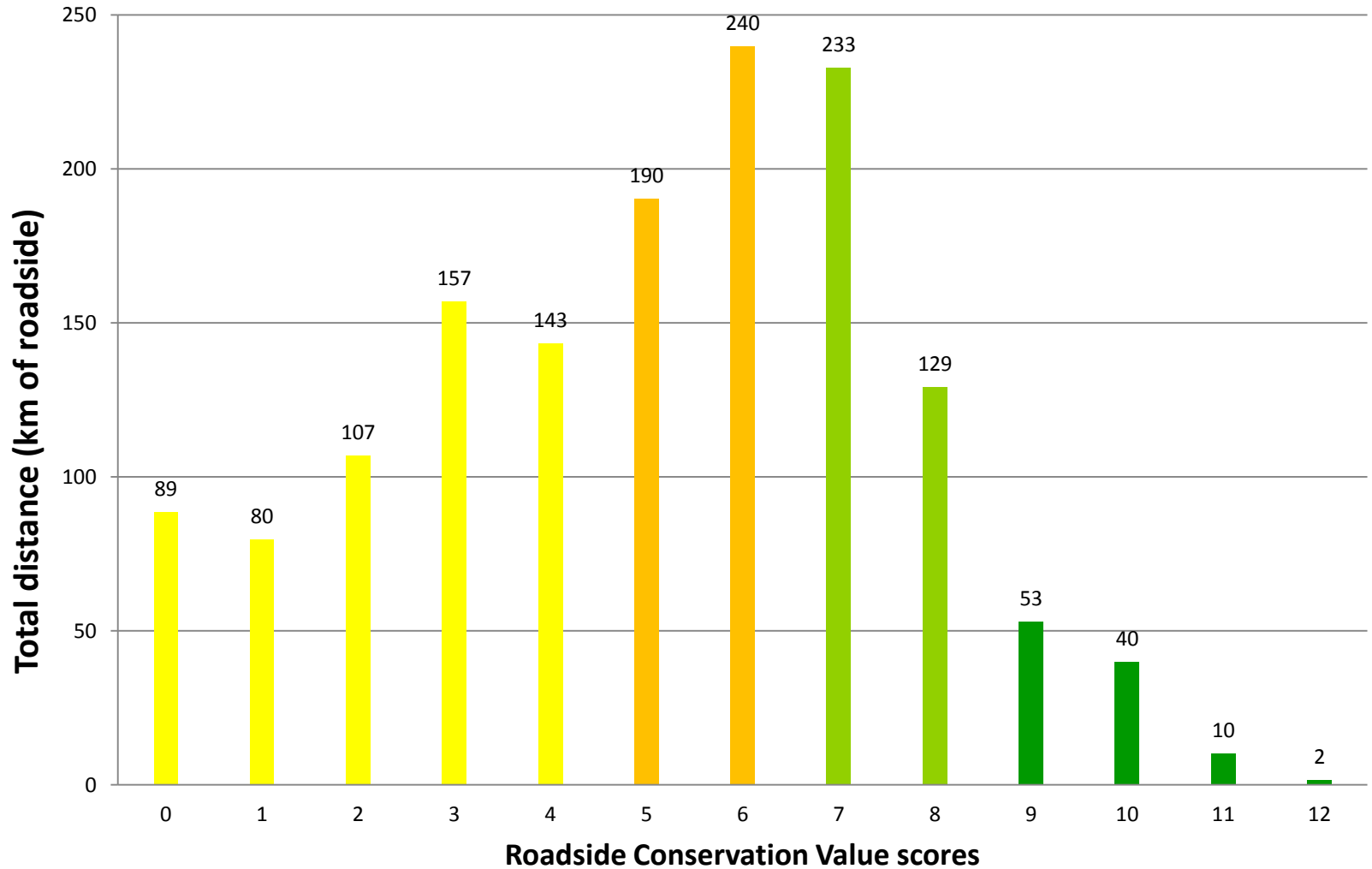
Extent of additional weeds covering less than 5km of roadside



\* On Roadside Conservation Committee - Environmental Roadside Weed List



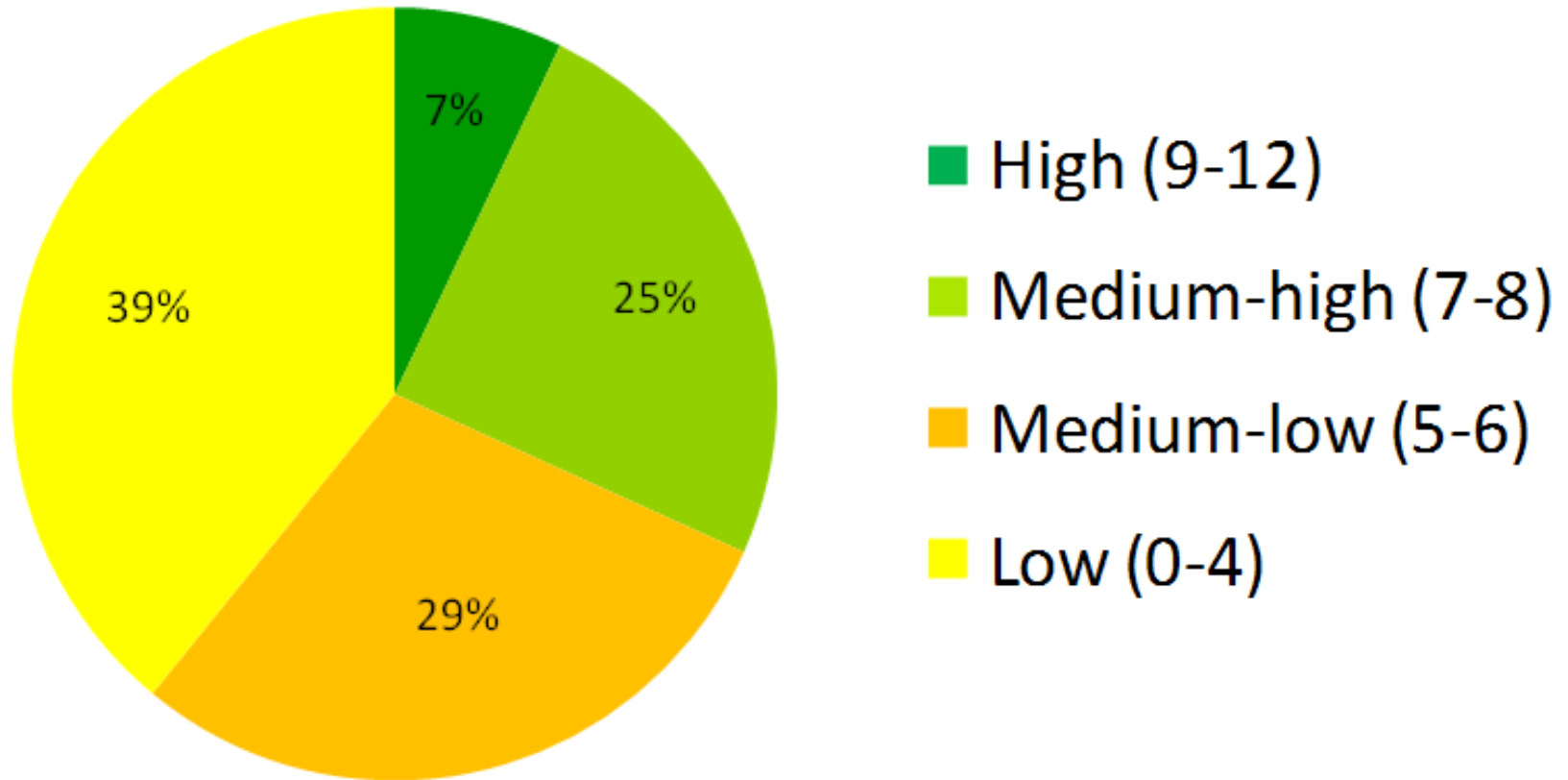
# Roadside Conservation Value scores



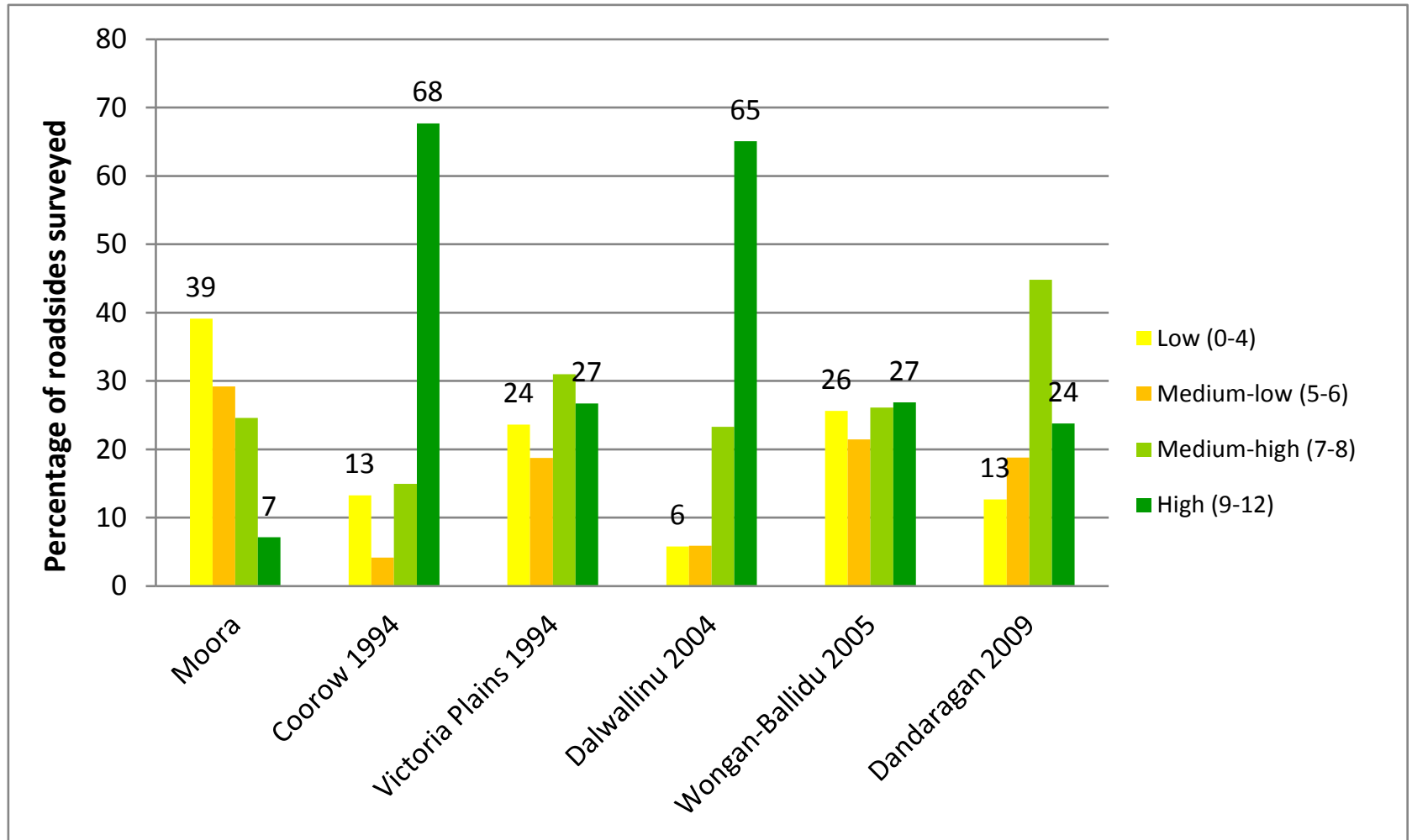
**Note: These values combine left & right hand sides**



# Conservation Status



# Comparison with Nearby Shires



# High Value Roads

- Boundary Road
- Kiaka Road
- Koojan West Road
- Masons Road
- Namban West Road
- Prices Road
- Watheroo West Road
- Airstrip Road
- Cattady Road
- Old Geraldton South Road
- Toodyay Bindi Bindi Road









# Management & Planning Tool

- Adopt specialised management techniques for different categories of roads

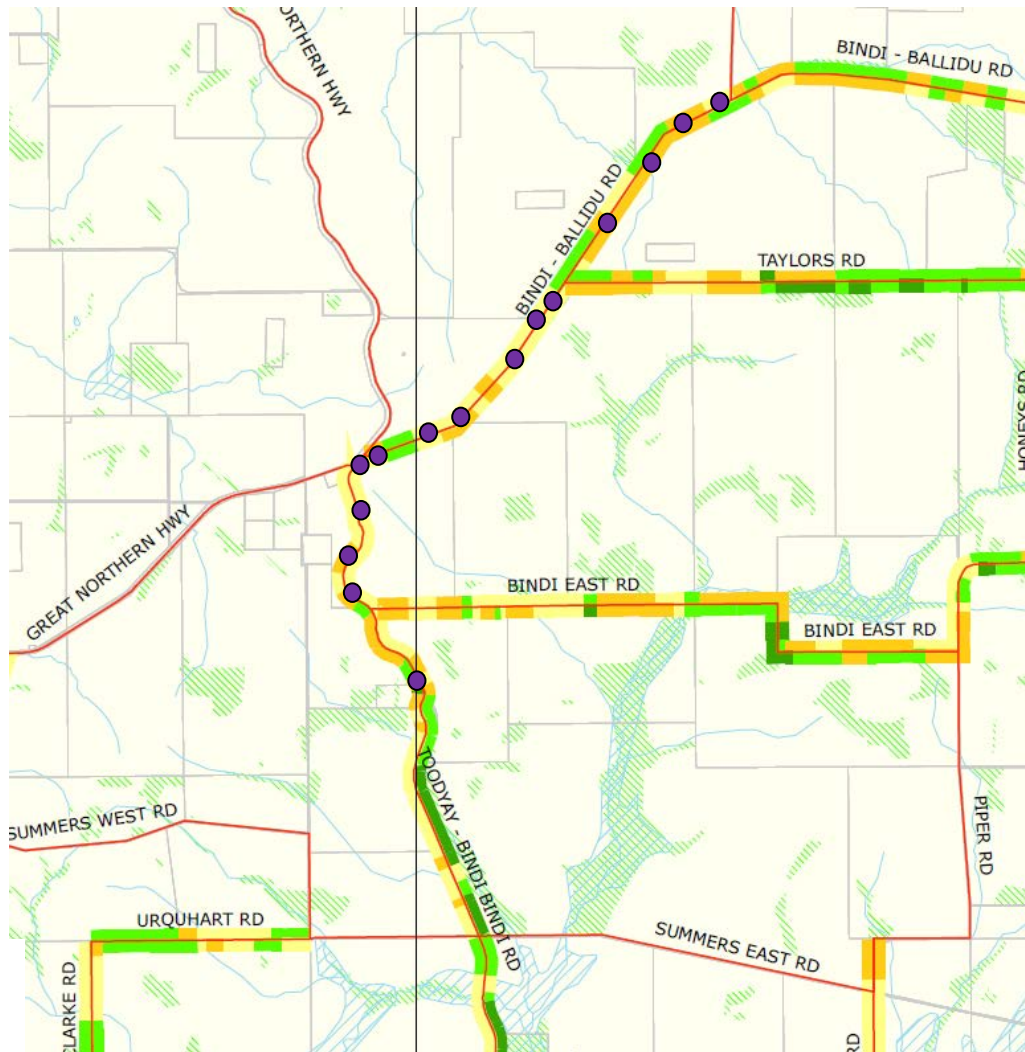
## High conservation value roadside:

Management goal		Maintain, enhance native plant communities
Management guidelines		Minimise disturbance

- Develop a *Roadside Register* (roads important for conservation)



# Assist with weed strategies & priorities.



## LEGEND

### Roadside Conservation Value

- Low (0-4)
- Medium low (5-6)
- Medium high (7-8)
- High (9-12)

### Road Reserve Width

- No reserve information
- 20m
- 40m
- 60m+

 Paterson's curse



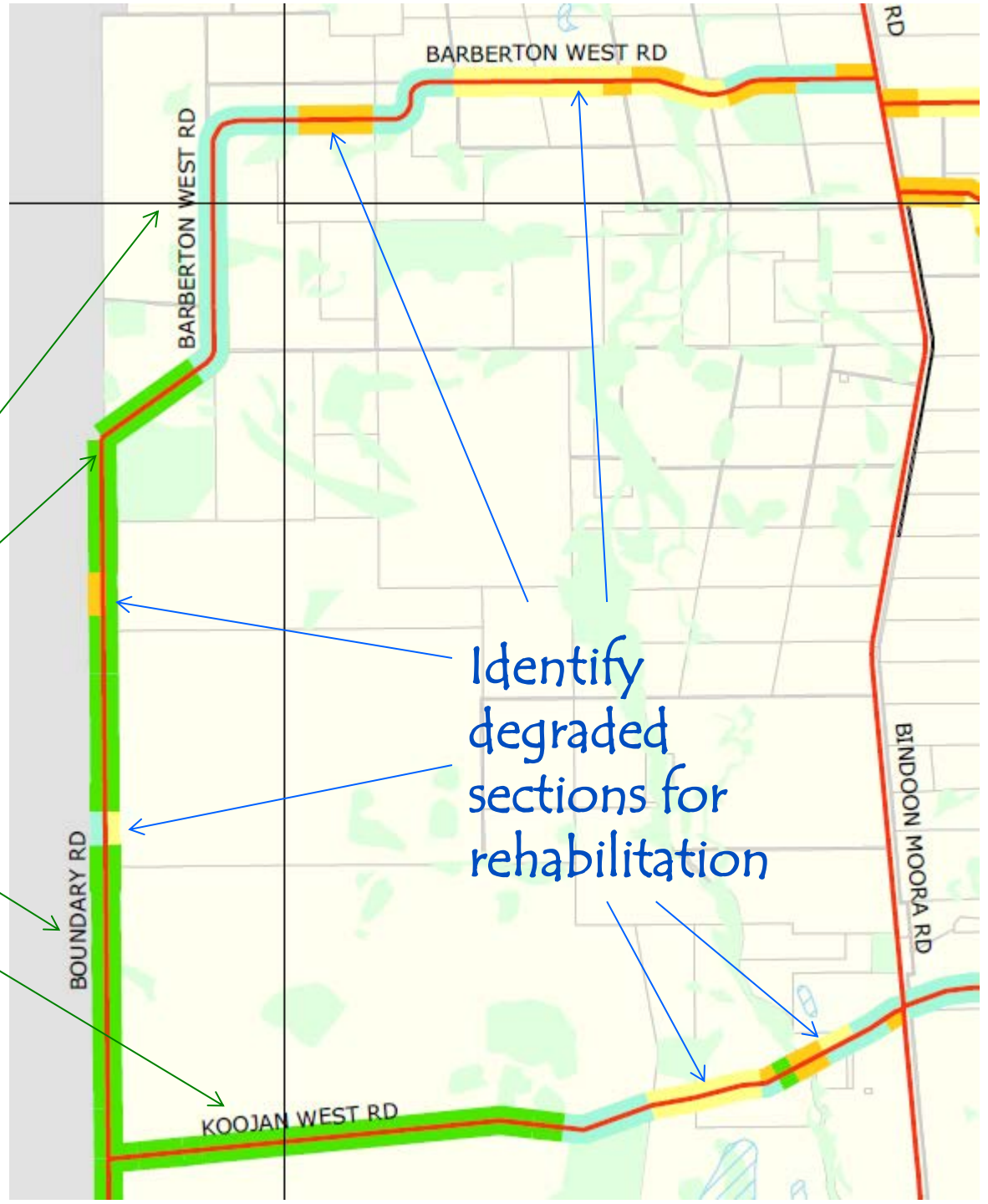
# LEGEND

## Roadside Conservation Value

- Low (0-4)
- Medium low (5-6)
- Medium high (7-8)
- High (9-12)
- Remnant vegetation
- Nature reserve

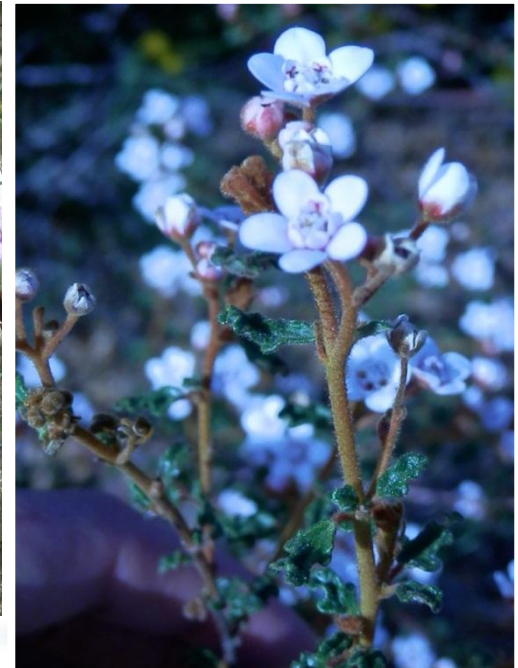
Identify potential landscape corridors

Identify degraded sections for rehabilitation



# Other Applications of the Map:

- Assessing road works impacts
- Funding applications/NRM grants
- Incorporate into Landcare & NRM projects
- Tourism (Flora Roads)
- Road reserve management plans and policies



# Sustainability of Roadside Values



The future of roadside values depends on the current management practices.



# The Big Picture

88% of WA road network are local government roads - covering approx. 125,500 km.

- Roadside vegetation is likely to be subject to increasing pressures and threats from road upgrades due to economic activity and road safety.
- Understanding the primacy of road safety, the Environmental Protection Authority's position is that roadside vegetation has high biodiversity and ecological linkage values.
- Its retention is critical, and should be considered in any road upgrade.



# Good Management Requires that All Issues are Considered and Balanced.



# Conclusion for Moora Shire

- A few high conservation roadsides with large diversity of flora and good habitat for native fauna eg. Carnaby's cockatoos.
- Several threatened species occur on roadsides in the shire
- Many low and medium conservation roads
  - Overtaken by weeds

## Threats

- Fire
- Salinity
- Erosion





# Contacting the RCC

For further information please contact:

## Roadside Conservation Committee

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