APPENDIX ONE: WORKSHOP EXPERTS

FAUNA

WORKSHOP ONE		
Expert	**Nominated area of expertise**	**Nominated by**
Mark Burgman	Population Viability Assessment	EA
Rod Kavanagh	Arboreal Mammals/Nocturnal Birds	SFNSW
Andrew Smith	Arboreal Mammals	NPWS
Peter Catling	Ground Dwelling Mammals	NPWS
Chris Belcher	Ground Dwelling Mammals	SFNSW
Harry Parnaby	Bats	NCC
Greg Richards	Bats	NPWS
Brad Law	Bats	SFNSW
Stephen Debus	Nocturnal Birds	NPWS
David Milledge	Nocturnal Birds	NCC
Richard Shodde	Diurnal Birds	NPWS
Jim Shields	Diurnal Birds	SFNSW
Gary Daly	Reptiles / Amphibians	NPWS
Frank Lemkert	Reptiles / Amphibians	SFNSW
Michael Mahoney	Reptiles / Amphibians	NCC

WORKSHOP TWO		
Expert	**Area of expertise**	**Nominated by**
Rod Kavanagh	Arboreal Mammals/Nocturnal Birds	SFNSW
Andrew Smith	Arboreal Mammals	NPWS
Andrew Claridge	Ground Dwelling Mammals	EA
Mike Saxon	Ground Dwelling Mammals	NPWS
Chris Belcher	Ground Dwelling Mammals	SFNSW
Harry Parnaby	Bats	NCC
Brad Law	Bats	SFNSW
Andy Spate	Bats	NPWS
Rod Kavanagh	Nocturnal Birds	SFNSW
David Milledge	Nocturnal Birds	NPWS

Sandy Gilmour	Diurnal Birds	NPWS
Jim Shields	Diurnal Birds	SFNSW
Gary Daly	Reptiles / Amphibians	NPWS
Frank Lemkert	Reptiles / Amphibians	SFNSW
Michael Mahoney	Reptiles / Amphibians	NCC

FLORA

BOTH WORKSHOPS		
Doug Binns	All species	SFNSW
David Keith	All species	NPWS
Michael Doherty	All species	Independent
Phil Gilmour	All species	Independent
Ross Peacock	All species	SFNSW

APPENDIX TWO: RULES FOR ASSESSING INTRINSIC RISK FOR FAUNA

Prioritization according to rarity in the region

Category 1

- If the species has a small geographic range and low relative abundance

OR

- if the species has a low relative abundance, medium geographic range and a narrow habitat specificity

OR

- medium relative abundance, small geographic range and narrow habitat specificity

Category 2

- If the species has a low relative abundance, a medium geographic range and a wide habitat specificity

OR

- If the species has a small geographic range and a high relative abundance

OR

- if the species has a medium relative abundance and a medium geographic range

OR

- If the species has a medium abundance, small, geographic range and a wide habitat specificity.

OR

- Large relative abundance, medium geographic range and narrow habitat specificity

OR

- Medium relative abundance, large geographic range and narrow habitat specificity

OR

- low relative abundance, large geographic range and narrow habitat specificity

Category 3

- large geographic range and high relative abundance

OR

- large geographic range, medium relative abundance and wide habitat specificity

OR

- medium geographic range, high relative abundance and wide habitat specificity

OR

- low relative abundance, large geographic range and wide habitat specificity

Prioritization according to population dynamics in the region

Apply the first rule that is appropriate to the data and do not continue further.

Move up two categories if:

- the species has declined since the arrival of Europeans and will continue to decrease without management intervention

OR

- the species has declined by more than 25% in the last ten years

Move up one category if:

- the species has decreased since the arrival of Europeans

OR

- will decrease without management intervention

OR

- has decreased by up to 25% in the last ten years

Move down one category if:

- the species has increased or remained stable since the arrival of Europeans and will continue to do so without management intervention

OR

- has increased by up to 25% over the last 10 years

Move down two categories if:

- the species has increased by more than 25% in the last 10 years.

APPENDIX THREE: FAUNA RISK OF EXTINCTION RESULTS

KEY

Since European settlement = % change in abundance in the region from the time of European settlement to 10 years ago.
Last ten years = % change in abundance in the region in the last 10 years.
Future without management = expected change in abundance in the region if there is no management intervention.
1st Category = the category the species falls into based on its range, abundance and habitat specificity. **2nd Category** = the category it was moved to, based on its change in abundance.

Species	Geographic Range	Relative abundance	Habitat specificity	Since European settlement	Last ten years	Future without management	1st Category	2nd Category
Greater Glider	med.	med.	narrow	-< 25	- >25	decrease	2	1
Greater Glider	med.	med.	narrow	-< 25	- >25	decrease	2	1
Koala	small	low	narrow	-< 25	- >75	decrease	1	1
Koala	small	low	narrow	-> 25	- >75	decrease	1	1
Koala	large	low	narrow	-< 25	- >75	decrease	1	1
Koala	med.	low	wide	stable	- >75	stable	2	1
Yellow-bellied Glider	small	low	narrow	-< 25	- >25	decrease	1	1
Yellow-bellied Glider	med.	low	narrow	stable	- >25	decrease	1	1
Barking Owl	med.	low	narrow	-< 25	- >25	decrease	1	1
Barking Owl	med.	low	narrow	stable	stable	decrease	1	1
Masked Owl	med.	low	wide	-< 25	- >25	decrease	1	1
Masked Owl	med.	med.	narrow	stable	-< 25	decrease	2	1

Species	Geographic Range	Relative abundance	Habitat specificity	Since European settlement	Last ten years	Future without management	1st Category	2nd Category
Powerful Owl	med.	high	wide	stable	- >25	decrease	3	2
Powerful Owl	med.	med.	wide	stable	stable	decrease	2	1
Sooty Owl	med.	med.	narrow	stable	-< 25	decrease	2	1
Sooty Owl	med.	med.	narrow	< 25	-< 25	decrease	2	1
Long-footed Potoroo	small	low	narrow	stable	stable	decrease	1	1
Long-nosed Bandicoot	med.	med.	narrow	stable	- >25	stable	2	1
Long-nosed Bandicoot	med.	low	narrow	stable	stable	stable	1	2
Long-nosed Potoroo	med.	low	wide	stable	- >25	stable	2	1
Long-nosed Potoroo	small	med.	narrow	< 25	- >25	decrease	1	1
Smoky Mouse	small	low	narrow	stable	unknown	decrease	1	1
Smoky Mouse	med.	low	narrow	unknown	decreased	decrease	1	1
Southern Brown Bandicoot	small	low	narrow	-< 25	- >25	decrease	1	1
Southern Brown Bandicoot	med.	low	narrow	stable	- >75	decrease	1	1
Tiger Quoll	small	low	wide	unknown	- >25	decrease	1	1
Tiger Quoll	med.	low	wide	stable	- >75	decrease	2	1
White-footed Dunnart	med.	low	narrow	stable	stable	decrease	1	1
Australasian Bittern	med.	low	narrow	- >25	- >25	decrease	1	1
Bush Stone-curlew	med.	low	narrow	- >75	- >75	decrease	1	1

Species	Geographic Range	Relative abundance	Habitat specificity	Since European settlement	Last ten years	Future without management	1st Category	2nd Category
Crested Shrike-tit	large	med.	wide	stable	-< 25	stable	3	3
Crested Shrike-tit	large	med.	wide	stable	stable	stable	3	4
Emerald Dove	med.	low	narrow	-< 25	stable	decrease	1	1
Glossy Black-Cockatoo	med.	med.	narrow	-< 25	-< 25	stable	2	1
Glossy Black-Cockatoo	large	low	wide	stable	-< 25	increase	5	4
Olive Whistler	large	low	narrow	stable	- >25	stable	2	1
Olive Whistler	small	low	narrow	stable	stable	stable	1	2
Pink Robin	small	low	wide	< 25	< 25	stable	1	2
Pink Robin	med.	low	narrow	stable	stable	stable	1	2
Red-browed Treecreeper	large	med.	narrow	stable	-< 25	stable	2	1
Red-browed Treecreeper	med.	med.	wide	stable	stable	stable	2	3
Regent Honeyeater	med.	low		- >75	- >75	decrease	1	1
Square-tailed Kite	med.	low	wide	-< 25	-< 25	decrease	2	1
Swift Parrot	med.	low	narrow	-< 25	-< 25	decrease	1	1
Turquoise Parrot	med.	low	narrow	-< 25	stable	stable	1	1
Varied Sittella	med.	med.	wide	stable	stable	stable	2	3
Yellow-tailed Black-Cockatoo	med.	med.	wide	stable	stable	stable	2	3
Common Death Adder	small	low	wide	- >25	-< 25	decrease	1	1

Species	Geographic Range	Relative abundance	Habitat specificity	Since European settlement	Last ten years	Future without management	1st Category	2nd Category
Common Scaly-foot	small	low	wide	- >25	- >25	decrease	1	1
Diamond Python	med.	low	wide	-< 25	stable	decrease	2	1
Diamond Python	med.	low	wide	-< 25	-< 25	decrease	2	1
Lace Monitor	med.	med.	wide	stable	stable	decrease	2	2
Booroolong Frog	med.	low	narrow	stable	stable	stable	1	2
Booroolong Frog	med.	low	narrow	- >25	- >25	decrease	1	1
Giant Burrowing Frog	med.	low	wide	stable	-< 25	decrease	2	1
Giant Burrowing Frog	small	low	narrow	stable	stable	decrease	1	1
Highlands Tree Frog	med.	low	wide	- >25	-< 25	decrease	2	1
Stuttering Barred Frog	small	low	narrow	- >75	- >75	decrease	1	1
Stuttering Barred Frog	med.	low	narrow	-< 25	- >25	decrease	1	1
Common Bentwing-bat	large	med.	narrow	decreased	decreased	decrease	2	1
Common Bentwing-bat	med.	unknown	narrow	decreased	Unknown	decrease	2	1
Eastern Horseshoe-bat	large	low	narrow	decreased	decreased	decrease	2	1
Eastern Little Mastiff-bat	med.	low	narrow	decreased	decreased	decrease	1	1

Species	Geographic Range	Relative abundance	Habitat specificity	Since European settlement	Last ten years	Future without management	1st Category	2nd Category
Golden-tipped Bat	small	low	narrow	decreased	decreased	decrease	1	1
Golden-tipped Bat	small	low	narrow	decreased	unknown	decrease	1	1
Great Pipistrelle	large	med.	narrow	decreased	stable	decrease	2	1
Great Pipistrelle	med.	low	narrow	unknown	unknown	decrease	2	1
Greater Broad-nosed Bat	large	low	narrow	decreased	decreased	decrease	1	1
Greater Broad-nosed Bat	small	low	narrow	unknown	unknown	decrease	1	1
Grey-headed Flying-fox	med.	med.	wide	unknown	- >25	decrease	2	1
Grey-headed Flying-fox	large	low	wide	decreased	decreased	decrease	3	1
Large-footed Myotis	large	low	narrow	decreased	decreased	decrease	2	1
Large-footed Myotis	med.	low	narrow	unknown	unknown	decrease	1	1
Large Forest Bat	large	med.	wide	decreased	decreased	decrease	3	1
Little-red Flying-fox	large	low	wide	decreased	stable	decrease	3	1
Yellow-bellied Sheathtail-bat	large	low	narrow	decreased	decreased	decrease	2	1
Yellow-bellied Sheathtail-bat	med.	low	wide	unknown	unknown	decrease	2	1

APPENDIX FOUR: LIST OF DISTURBANCES THAT AFFECT THE PRIORITY FAUNA SPECIES

Species	Disturbance	Tenure
Greater Glider	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Koala	Clearing / Habitat Fragmentation	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Yellow-bellied Glider	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Barking Owl	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Hazard Reduction burn	Private, SF
	Human Interference	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Masked Owl	Clearing / Habitat Fragmentation	Private, SF

	Hazard Reduction burn	Private, SF, NPWS
	Human Interference	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Powerful Owl	Clearing / Habitat Fragmentation	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Human Interference	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Species	**Disturbance**	**Tenure**
Sooty Owl	Clearing / Habitat Fragmentation	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Human Interference	Private, SF, NPWS
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Long-footed Potoroo	Clearing/Habitat Fragmentation	Private, SF
	Hazard Reduction Burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Poisoned Baiting	Private, SF, NPWS
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Long-nosed Bandicoot	Clearing/Habitat Fragmentation	Private, SF
	Hazard Reduction Burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Poisoned Baiting	Private, SF, NPWS
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Long-nosed Potoroo	Clearing / Habitat Fragmentation	Private, SF
	Hazard Reduction Burn	Private, SF, NPWS
	Integrated Logging	Private, SF

	Poisoned Baiting	Private, SF, NPWS
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Smoky Mouse	Fire Exclusion	Private, SF, NPWS
	Hazard Reduction Burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Southern Brown Bandicoot	Fire Exclusion	Private, SF, NPWS
	Hazard Reduction Burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Poisoned Baiting	Private, SF, NPWS
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Tiger Quoll	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Hazard Reduction Burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Poisoned Baiting	Private, SF, NPWS
	Predation - foxes, dogs, cats	Private, SF, NPWS
White-footed Dunnart	Clearing/Habitat Fragmentation	Private, SF
	Hazard Reduction Burns	Private, SF, NPWS
	Integrated Logging	SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Species	**Disturbance**	**Tenure**
Australasian Bittern	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Habitat Alteration - Draining Wetlands	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF

	Wildfire	Private, SF, NPWS
Bush Stone Curlew	Clearing / Habitat Fragmentation	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
	Habitat Alteration - Draining Wetlands	Private, SF
Crested Shrike-tit	Clearing / Habitat Fragmentation	Private, SF
	Dieback	Private
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Emerald Dove	Clearing / Habitat Fragmentation	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Glossy Black-Cockatoo	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Habitat Alteration - Firewood Collection	Private, SF, NPWS
	Habitat Alteration - Urban Development	Private
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Olive Whistler	Clearing / Habitat Fragmentation	Private, SF
	Habitat Alteration - Urban Development	Private
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Pink Robin	Baiting for Predators	Private, SF, NPWS
	Clearing / Habitat Fragmentation	Private, SF
	Habitat Alteration - Firewood	Private, SF, NPWS

	Collection	
	Habitat Alteration - Urban Development	Private
	Hazard Reduction burn	Private, SF, NPWS
	Hazard Reduction burn	SF
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS

Species	Disturbance	Tenure
Red-browed Treecreeper	Clearing / Habitat Fragmentation	Private, SF
	Habitat Alteration - Urban Development	Private
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Regent Honeyeater	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Square-tailed Kite	Clearing / Habitat Fragmentation	Private, SF
	Habitat Alteration - Urban Development	Private
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Swift Parrot	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Turquoise Parrot	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
	Clearfelling	Private, SF
	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
Varied Sittella	Wildfire	Private, SF, NPWS
Yellow-tailed Black-Cockatoo	Clearfelling	Private, SF
	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS

Common Death Adder	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Habitat Alteration - Firewood Collection	Private, SF, NPWS
	Habitat Alteration - Urban Development	Private
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, NPWS, SF
	Wildfire	Private, SF, NPWS
Common Scaly-foot	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Species	**Disturbance**	**Tenure**
Diamond Python	Baiting for Predators	Private, SF, NPWS
	Clearing / Habitat Fragmentation	Private, SF
	Habitat Alteration - Firewood Collection	Private, SF, NPWS
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Lace Monitor	Baiting for Predators	Private, SF, NPWS
	Clearing / Habitat Fragmentation	Private, SF
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Giant Burrowing Frog	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Habitat Alteration - Urban Development	Private
	Hazard Reduction burn	Private, SF, NPWS

	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Green and Golden Bell Frog	Baiting for Predators	Private, SF, NPWS
	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Habitat Alteration - Draining Wetlands	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Predation - Introduced Fish	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
Highlands Tree Frog	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Wildfire	Private, SF, NPWS
	Integrated Logging	Private, SF
	Wildfire	Private, SF, NPWS
Stuttering Barred Frog	Clearing / Habitat Fragmentation	Private, SF
	Grazing	Private, SF
	Hazard Reduction burn	Private, SF, NPWS
	Integrated Logging	Private, SF
	Predation - foxes, dogs, cats	Private, SF, NPWS
	Predation - Introduced Fish	Private, SF, NPWS
	Wildfire	Private, SF, NPWS

APPENDIX FIVE: FAUNA RESEARCH AND MONITORING RECOMMENDATIONS

Species Common Name	Research and Monitoring Recommendations
Glossy Black Cockatoo	• research/monitor use of logged habitat in the home range • research into management to maintain reproduction, flowering and regeneration of *Allocasuarina.*
Greater Glider	• monitoring of lower slope reservation and 40yr logging cycle • evaluate off park prescriptions including selective logging • monitoring (10 yrs) informal reserves if populations declining
Grey-headed Flying Fox	• investigate the impact of fire on flowering. • identify 'camp' sites.
Koala	• monitoring (10 yrs) informal reserves if populations declining
Long-footed Potoroo	• monitor objective of baiting • more research on baiting protocols and impact of this practice • survey Upper Brogo River area
Long-nosed Bandicoot	• monitor objective of baiting. • more research on baiting protocols and impact of this

	practice • survey Upper Brogo River area
Long-nosed Potoroo	• monitor objective of baiting • more research on baiting protocols and impact of this practice
Olive Whistler	• research into buffer effect in rainforest
Pink Robin	• research into buffer effect in rainforest
Smoky Mouse	• need stratified replicated site based research on intensity/frequency of fire and how they influence the species • monitor objective of baiting • more research on baiting protocols and impact of this practice • more survey work needed in suitable habitat
Southern Brown Bandicoot	• monitor objective of baiting • more research on baiting protocols and impact of this practice • survey Area A of distribution model • need to clarify regional status of this species
White-footed Dunnart	• more survey work is needed in Eden
Square Tailed Kite	• research on the impact of logging on nest sites and management to ameliorate any affects • investigate current records to identify nests and territories
Swift Parrot	• investigate the impact of logging and the best way to provide an adequate mosaic of food resources
Tiger Quoll	• more research on baiting protocols and impact of this practice • more research on impact of integrated logging
Yellow-bellied Glider	• monitoring of lower slope reservation and 40yr logging cycle • monitor objective of baiting

	• more research on baiting protocols and impact of this practice
Giant Burrowing Frog	• Survey work on all land tenures and for all life cycles with emphasis on heathland
Booroolong Frog	• desktop study to assess status and distribution in region.
Stuttering Barred Frog	• Survey work needed on all land tenures of all life cycles
Hollow roosting bats	Need research into: • roosting and foraging preferences • effectiveness of prescriptions using radio tracking • site fidelity of marked animals • regional movements • survey work on all Schedule 2 species
Large-footed Myotis	• research diet and taxonomy • need survey work especially under bridges
Common Bentwing bBat	• research on the foraging movements of subterranean roosting species • monitor key populations

MONITORING AND SURVEY RECOMMENDATION FOR HERPETOFAUNA

The workshop made the following recommendation on monitoring and surveys for the herpetofauna:

- Monitoring and surveys must be shown to be valid and reliable. This will be enhanced by the establishment of protocols for specific taxa.
- It was recommended that monitoring be undertaken for forest dependent species to determine the on going status of populations on both reserved and non reserved lands.

APPENDIX SIX: RECOMMENDED MANAGEMENT PRESCRIPTIONS

BURNING PRESCRIPTIONS

Type of Prescription	**Objective**	**Size or Timing**	**Species**
Appropriate prescription burning	maintain fruit production of *Allocasuarina*	burning interval >6 yrs	Glossy Black-Cockatoo
	ensure occurrence of senescent *Acacia*		Yellow tailed Black-Cockatoo
	retention of feeding resources by minimising high scorch burns	burn height < 1 m	Crested Shrike-tit, Red-browed Treecreeper
	avoid high intensity burns		Tiger Quoll
	creation of suitable habitat	burning interval > 10 yrs	Smoky Mouse, Southern Brown Bandicoot
	create open understorey and tall cover	burning interval >15-20 yrs	Long-nosed Potoroo, White-footed Dunnart, Long-nosed Bandicoot
	Prevent wildfire in an 'environmentally sensitive' way	needs to be further defined for species or groups of species	Australasian Bittern, Barking Owl, Bush Stone- Curlew, Koala, Greater Glider, Yellow-bellied Glider, Common Death Adder, Common Scaly Foot, Diamond Python, Emerald Dove, Green and Golden Bell Frog, Square-tailed Kite, Lace Monitor, Regent Honey-eater, Swift Parrot, Turquoise parrot, Varied Sittella, hollow roosting bats

	Prevent wildfire	burning interval > 5 yrs	Giant Burrowing Frog, Highlands Tree Frog
Excluding prescription burning in nominated areas	maintain rainforest habitat		Olive Whistler, Pink Robin, Stuttering Barred Frog
	maintain gully habitat		Powerful Owl, Sooty Owl, Masked Owl

SILVICULTURAL PRACTICES

Type of Prescription	**Objective**	**Size or Timing**	**Species**
Reduce harvesting intensity	maintain uneven aged structure with mature trees		Yellow-bellied Glider, Koala
Log alternate coupes		cycle is at least 40 years	Koala, Yellow-bellied Glider, Greater Glider
Tree retention	research maintaining Allocasuarina		Glossy Black Cockatoo
	retain feeding trees as 'Habitat trees'		Crested Shrike-tit, Red-browed treecreeper
	retain feeding trees as 'Habitat trees'	4 trees (>40 cm DBH) per ha.	Swift Parrot
	maintain all ironbarks		Regent Honeyeater, Swift Parrot
	maintain feed trees		Koala, Common Bentwing bat
	maintain hollow bearing timber (standing and fallen)	> 50 cm. DBH (for Tiger Quoll)	Lace Monitor, Diamond Python, Tiger Quoll
Habitat retention (other than trees)	retain ground cover/ litter		Diamond Python, Common Death Adder, Common Scaly Foot
	retain termite mounds		Lace Monitor, Diamond Python, Tiger Quoll
	retain woody debris		Bush-stone Curlew

HABITAT RETENTION WITHOUT LOGGING

Type of Prescription	Objective	Size or Timing	Species
Logging Exclusion	retain habitat	300 ha,. with deficit in stream buffers	Powerful Owl, Barking Owl [1]*
	retain habitat	300 ha,. in unlogged saddles which should be connected to other reserved areas	Masked Owl
	retain habitat	300 ha,. with deficit in gully head, dark gorge or rainforest type habitat	Sooty Owl
	retain habitat	300 ha,. with deficit in gully head, dark gorge or rainforest type habitat	Sooty Owl
	retain habitat	300 ha,. with deficit in gully head, dark gorge or rainforest type habitat	Sooty Owl
	retain habitat	retain a mosaic of habitat within home range	Square-tailed Kite, Hollow roosting bats
	lower slope reservation		Yellow-bellied Glider, Greater Glider
Retention of patches of suitable habitat	maintain a mosaic of resources throughout the landscape	for Grey-headed Flying-fox priority should be given to areas up to 50 km. away from campsites	Hollow roosting bats, Grey-headed Flying-fox [2]
No logging, clearing or burning	maintain high quality habitats	in habitat and upstream from it	Stuttering Barred Frog, Giant Burrowing Frog, Highlands Tree Frog, Common Death Adder, Common Scaly Foot

[1] A firm recommendation by the experts was to propose legislation to provide incentives for private land conservation and strategic land purchases, as being important to conserve the Barking Owl. Voluntary Conservation Agreements, Landcare and Rivercare programs were also considered important.

[2] As bats are poorly understood in the Eden Region, Environment Australia has concerns about the reliability of the management recommendations put forward for bats.

BUFFERS

Type of Prescription	Objective	Size or Timing	Species
Roost Buffers	protect roosts	50 m.	Powerful Owl, Sooty Owl, Masked owl
	protect seacave roosts	100 m.	Common Bentwing- Bat #
	protect maternity, transient and winter roosts	1000 m. + increased habitat tree retention 1-3000 m.out from maternity sites+C6	Common Bentwing- Bat #
	protect roosts and surrounding food resources		Eastern Horseshoe-bat #
	protect camp sites	200-500 m.	Grey-headed Flying-fox #
Nest tree buffers	protect nests	100 m.	Glossy Black Cockatoo,
		200 m.	Powerful Owl, Sooty Owl, Masked Owl
		50 m.	Yellow tailed Black-Cockatoo
Riparian buffers	to maintain habitat	200 m. (100 m for 3rd and higher order streams with low intensity harvesting in outer 50 m.)	Yellow-bellied Gliders
	protect 300 ha. of high quality habitat by increasing buffer on 1st order streams, headwaters, rainforest and other drainage features		Powerful Owl, Sooty Owl
	protect grassy woodlands beside major river systems	1000 m.	Barking Owl
	maintain the long-term integrity of the riparian enviornment		Large-footed Myotis, Golden-tipped Bat #, Booroolong Frog
	connect catchments	1000 m. of unlogged or lightly logged areas with long rotations	Stuttering Barred Frog, Giant Burrowing Frog, Highlands Tree Frog
Buffer	protect known sedentary populations	200 m. to a maximum of 10 populations	Koala
	protect all rainforest types (API and KBS)		Sooty Owl

OTHER

Type of Prescription	Objective	Size or Timing	Species
Restoration and replanting via Landcare	re-establish ironbark forest		Regent Honeyeater, Swift Parrot
	re-establish native woodland species		Turquoise Parrot
	connect old woodland systems along Bega valley		Koala, Barking Owl
Predator control	reduce predation	baits buried more than 15 cm. down, have an adequate free feed period, monitor baits daily and include public education on private land	ALL SPECIES EXCEPT-Australasian Bittern, Crested Shrike Tit, Emerald Dove, Glossy Black Cockatoo, Regent Honeyeater, Square- tailed Kite, Turquoise Parrot, Varied Sittella, Yellow-tailed Black Cockatoo and all bats
	predator baiting that reduces non-target impacts		Southern Brown Bandicoot, Long-nosed Potoroo, Long-nosed Bandicoot, Long-footed Potoroo, Tiger Quoll, Lace Monitor
Appropriate road design	avoid water flow alterations		Stuttering Barred frog, Green and golden Bell Frog, Giant Burrowing Frog, Highlands Tree Frog
Apply LegislationSEP 44 & 46	reduce or prevent land clearing		Greater Glider, Koala, Yellow-bellied Glider, Long-nosed Potoroo, Long-nosed Bandicoot, Glossy Black Cockatoo, Olive Whistler, Red-browed Treecreeper, Square-tailed Kite, Swift Parrot, Common Death Adder, Common Scaly Foot, Lace Monitor, Giant Burrowing Frog, Stuttering Barred Frog, Highlands Tree Frog Large footed Myotis
Refer to Recovery Plan			Long-footed Potoroo

APPENDIX SEVEN: FUNCTIONAL GROUPS, POPULATION TARGETS & SIGNIFICANCE OF PRIORITY FLORA SPECIES

SPECIES	FUNCTIONAL GROUP				
Species	**High**	**Low**	**Direct Mechanical Damage**	**Target populations**	**Significance**
Acacia blayana	SI	SI	SI	5	locally endemic
Acacia constablei	SI	SI	SI	5	locally endemic
Acacia costiniana	SI	SI	SI	5	restricted outside region, southern limit, disjunct pop.
Acacia georgensis	SI/Σ I	SI/Σ I	SI/Σ I	5	restricted outside region, southern limit
Acacia lucasii	SI/Σ I	SI/Σ I	SI/Σ I	5	regionally uncommon, disjunct, possibly northern limit
Acacia oxycedrus	SI	SI	SI	5	regionally uncommon, local northern limit
Acacia pyncantha	SI/Σ I	SI/Σ I	SI/Σ I	5	regionally uncommon, unusual habitat
Acacia subporosa	SI	SI	SI	5	restricted outside, northern limit

Acacia subtilinervis	SI/Σ I	SI/Σ I	SI/Σ I	5	disjunct pop.
Acronychia oblongifolia	DT	ΔT	ΔT	5	regionally uncommon
Actinotus gibbonsii	SI	SI	SI	Survey	uncommon throughout distribution, southern limit, disjunct pop., unusual habitat
Adriana glabrata	CI	CI	CI	5	regionally uncommon
Alectryon subcinereus	DT	ΔT	ΔT	5	regionally uncommon
Allocasuarina diminuta ssp. annectens	VI	VI	VI	5	regionally uncommon, southern limit, disjunct pop.
Allocasuarina distyla	CI	CI	CI	5	regionally uncommon, southern limit
Ammobium alatum	DI/DT	DI/DT	DI/DT	Survey	regionally uncommon
Asplenium australasicum	DR	DR	DR	Target all known sites	southern llimit, there are less than ten known sites
Asterolasia astericophora	SI/Σ I	SI/Σ I	SI/Σ I	5	uncommon throughout distribution
Astroloma pinifolum	SI?	SI?	SI?	5	regionally uncommon
Australopyron pectinatum	CT	CT	Ct	Target all known sites	There are less than five known sites
Baeckea denticulata	SI/Σ I	SI/Σ I	SI/Σ I	5	southern limit
Banksia spinulosa var. cunninghamii	CI	CI	CI	Target all known sites	local northern limit, there are less than five known sites
Boronia deanei	Σ I?	Σ I?	Σ I?	5	southern limit, disjunct pop.
Boronia nana var. hyssopfolia	SI	SI	SI	5	regionally uncommon
Boronia rigens	SI?	SI?	SI?	5	regionally uncommon, southern limit
Botrychium australe	UT	UT	UT	5	uncommon throughout distribution

Bracteantha viscosa	DI	DI	DI	5	regionally uncommon
Burnettia cuneata	UI	UI	UI	5	disjunct pop.
Caladenia clarkiae	UT	UT	UT	5 + 5	northern limit, regionally uncommon
Caladenia sp. aff. reticulata	UT	UT	UT	5 + 5	uncommon throughout distribution, northern limit
Caladenia tesselata	UT	UT	UT	5 + 5	nationally significant
Callitris muelleri	CI	CI	CI	5	regionally uncommon
Calotis glandulosa	CI	CI	CI	5	southern limit
Cassinia aureonitens	NI	CI	CI	5	regionally uncommon, southern limit, disjunct pop.
Cassinia cunninghamii	NI	CI	CI	Survey	regionally uncommon, southern limit, disjunct pop.
Cassinia uncata	NI	CI	CI	5	regionally uncommon
Caustis recurvata	SI	SI	SI	Survey	regionally uncommon, southern limit
Chorizema parvifolium	Σ I	Σ I	Σ I	Survey	regionally uncommon
Clematis microphylla var. leptophylla	DT	ΔT	ΔT	5	regionally uncommon
Comesperma sphaerocarpa	SI	SI	SI	5	regionally uncommon
Correa baeuerlenii	SI	SI	SI	Monitor	southern limit, disjunct pop.
Cryptandra scortechinii	SI/?	SI/?	SI/?	5	regionally uncommon, southern limit
Cryptostylis hunteriana	UT	UT	UT	5 + 5	nationally significant
Cyathea leichhardtiana	ΔT	ΔT	ΔT	5	regionally uncommon

Cymbidium suave	WR	WR	WR	10	southern limit
Davalllia pyxidata	DR	DR	DR	10	regionally uncommon, local southern limit
Daviesia acicularis	Σ I?	Σ I?	Σ I?	5	regionally uncommon
Daviesia suaveolens	SI/Σ I	SI/Σ I	SI/Σ I	5	southern limit
Dendrobium aemulum	DR	DR	DR	10	southern limit
Desmodium brachypodium	Σ I	Σ I	Σ I	10	regionally uncommon
Deyeuxia accedens	CT	CT	CT	5	northern limit
Deyeuxia talariata	CT	CT	CT	5	uncommon throughout distribution
Dillwynia juniperina	SI	SI	SI	5	regionally uncommon
Dodonaea multijuga	SI	SI	SI	5	regionally uncommon, southern limit, disjunct pop.
Dodonaea rhombifolia	SI?	SI?	SI?	5	nationally significant
Dodonaea triangularis	SI?	SI?	SI?	Survey	regionally uncommon, southern limit, disjunct pop.
Ehretia acuminata	DT	ΔT	ΔT	5	regionally uncommon, southern limit
Epacris robusta	SI	SI	SI	5	regionally uncommon, southern limit
Epilobium pallidiflorum	DI	DI	DI	5	uncommon throughtout distribution, depleted in the wild
Eriostemon myoporoides spp. myoporoides	SI/VI	Σ I	Σ I	5	regionally uncommon
Eriostemon virgatus	SI	SI	SI	5	regioanally uncommon, northern limit
Eucalyptus badjensis	VI	UI	VI	5	southern limit

Eucalyptus baeuerlenii	VI	UI	VI	5	regionally uncommon, southern limit
Eucalyptus baueriana	VI	UI	VI	10	depleted in the wild
Eucalyptus conspicua	VI	UI	VI	5	uncommon throughout distribution, northern limit
Eucalyptus croajingolensis	VI	UI	VI	5	northern limit
Eucalyptus ignorabilis	VI	UI	VI	5	uncommon throughout distribution, northern limit
Eucalyptus imlayensis	VI	UI	VI	5	locally endemic
Eucalyptus latiuscula	VI	UI	VI	5	uncommon throughout distribution, southern limit
Eucalyptus melliodora	VT	UI	VI	10	regionally uncommon, unusual habitat
Eucalyptus olsenii	VI	UI	VI	5	southern limit, regionally uncommon
Eucalyptus paliformis	CI	WI	CI	5	nationally significant, endemic
Eucalyptus parvula	VT	VI	VI	10	southern limit
Eucalyptus pseudoglobulus	VI	UI	VI	5	regionally uncommon, northern limit
Eucalyptus sp. aff. globoidea	VI	UI	VI	5	uncommon throughout distribution, northern limit
Eucalyptus spectatrix	VI	VI	VI	5	locally endemic
Eucalyptus stellulata	VT	VT	VI	5	regionally uncommon
Eucalyptus stenostoma	CI	WI	CI	5	regionally uncommon, southern limit
Eucalyptus tereticornis	VT	VT	VI	10	depleted in the wild
Eucalyptus wilcoxii	VI	VI	VI	5	southern limit

Eucryphia moorei	VT	VT	VT	5	uncommon throughtout distribution
Festuca asperula	UT	UT	UT	5	uncommon throughout distribution
Festuca eriopoda	UT	UT	UT	5	regionally uncommon
Festuca hookeriana	UT	UT	UT	5	regionally uncommon
Gaultheria appressa	DT	DT	DT	5	southern limit
Genoplesium rhyoliticum	UI	UI	UI	5	local endemic
Grevillea acanthifolia ssp. paludosa	SI	SI	SI	5	locally endemic
Grevillea miqueliana	SI	SI	SI	5	regionally uncommon, disjunct pop.
Grevillea mucronulata	SI	SI	SI	Target all known populations	regionally uncommon, southern limit, there are less than five known sites
Hakea macreana	CI	CI	CI	10	southern limit
Haloragodendron baeuerlenii	SI/Σ I	SI/Σ I	SI/Σ I	5	nationally significant
Haloragodendron monospermum	SI	SI	SI	5	uncommon throuthout distribution (southern tablelands endemic), southern limit
Helichrysum collinum	NI	CI	CI	5	regionally uncommon, southern limit, disjunct pop.
Hibbertia hermanniifolia	SI/Σ I	Σ I	Σ I	5	locally endemic?
Hibbertia saligna	SI	SI	SI	5	regionally uncommon, southern limit, disjunct pop.
Hibbertia sp. nov. aff. hermanniifolia	SI/Σ I	Σ I	Σ I	5	locally endemic?
Hovea longifolia	SI	SI	SI	5	regionally uncommon, southern limit, disjunct pop.
Jacksonia scoparia	Σ I	Σ I	Σ I	5	disjunct pop., regionally uncommon, southern limit

Korthalsella rubra	DR	DR	DR	10	regionally uncommon
Kunzea sp. C (aff.capitata)	SI/Σ I	SI/Σ I	SI/Σ I	5	regionally uncommon, southern limit
Lasiopetalum parvifolium	Σ I	Σ I	Σ I	5	uncommon throughout distribution, southern limit
Lepidium hyssopifolium	ST	ST	ST	5	nationally significant
Lepidium pseudotasmanicum	ST	ST	ST	5	uncommon throughout distribution
Leptorhynchos nitidulus	SI?	SI?	SI?	5	regionally uncommon
Leptospermum scoparium	CI	CI	CI	5	northern limit
Leucopogon attenuatus	SI?	SI?	SI?	5	regionally uncommon
Leucopogon setiger	SI	SI	SI	5	regionally uncommon, southern limit, disjunct pop.
Leucopogon suaveolens	SI	SI	SI	5	regionally uncommon
Livistona australis	UT	UT	UT	5	regionally uncommon
Logania pusilla	SI	Σ I	Σ I	5	regionally uncommon
Lotus australis	Σ I	Σ I	Σ I	Survey	regionally uncommon
Lycopodium myrtifolium	ΔR	ΔR	ΔR	5	regionally uncommon
Macrozamia communis	UT	UT	UT	5	southern limit, global limit for cycads
Mazus pumilio	Σ I/T I	Σ I/T I	Σ I/T I	5	regionally uncommon
Mirbelia pungens	Σ I	Σ I	Σ I	5	regionally uncommon
Monotoca albens	DI?	DI?	DI?	5	regionally uncommon, southern limit

Monotoca rotundifolia	S I / Σ I			5	regionally uncommon
Myoporum bateae	SI	SI	SI	5	uncommon throughout distribution, southern limit
Notothixos subaurens	DR	DR	DR	10	regionally uncommon
Opercularia diphylla	SI	SI	SI	Survey	regionally uncommon, southern limit
Oxylobium scandens var. scandens	Σ I	Σ I	Σ I	5	uncommon throughout distribution, depleted in the wild, southern limit
Ozothamnus conditus	DI	CI	CI	5	regionally uncommon
Pentapogon quadrifidus	DT	DT	DT	5	regionally uncommon
Persoonia asperula	SI/Σ I	SI/Σ I	SI/Σ I	5	regionally uncommon
Persoonia brevifolia	SI/Σ I	SI/Σ I	SI/Σ I	5	restricted outside region, northern limit
Phebalium carruthersii	SI?	SI?	SI?	5	southern limit
Phebalium ellipticum	SI?	SI?	SI?	5	regionally uncommon, southern limit
Phebalium ralstonii	SI	SI	SI	10	locally endemic
Phebalium rhytidophyllum	SI?	SI?	SI?	5	locally endemic
Pimelea curviflora spp. gracilis var. sericea	Σ I	Σ I	Σ I	10	regionally uncommon
Pittosporum bicolor	DR	DR	DR	10	regionally uncommon
Platycerium bifurcatum ssp. bifurcatum	DR	DR	DR	10	regionally uncommon, southern limit
Poa cheelii	UT	UT	UT	5	southern limit
Poa costiniana	UT	UT	UT	5	regionally uncommon

Podocarpus spinulosus	UI/VI	UI/VI	UI/VI	5	regionally uncommon, southern limit
Pomaderris angustifolia	SI	SI	SI	5	regionally uncommon
Pomaderris betulina	SI	SI	SI	5	regionally uncommon
Pomaderris bodalla	SI/Σ I	SI/Σ I	SI/Σ I	5	regionally uncommon, locally abundant, southern limit
Pomaderris brogoensis	Σ I	Σ I	Σ I	5	restricted outside region
Pomaderris costata	SI	SI	SI	5	nationally significant
Pomaderris cotoneaster	SI	SI	SI	5	nationally significant
Pomaderris elachophylla	SI	SI	SI	5	regionally uncommon, northern limit
Pomaderris eriocephala	SI	SI	SI	5	regionally uncommon
Pomaderris parrisiae	SI	SI	SI	5	restricted outside region, southern limit
Pomaderris pauciflora	SI/Σ I	SI/Σ I	SI/Σ I	5	nationally significant
Pomaderris virgata	SI	SI	SI	5	restricted outside region, southern limit
Prostanthera walteri	SI	SI	SI	5	northern limit
Pschotria loniceroides	DT	DT	DT	5	southern limit
Pseudanthus divaricatissimus	SI	SI	SI	5	nationally significant
Psoralea adscendens	SI	SI	SI	5	regionally uncommon
Pterostylis plumosa	UT	UT	UT	5	regionally uncommon, disjunct pop., unusual habitat
Pultenaea blakelyi	SI	SI	SI	5	regionally uncommon, southern limit

Pultenaea hispidula	SI	SI	SI	5	regionally uncommon
Pultenaea parrisiae ssp. parrisiae	SI	SI	SI	5	regionally uncommon, restricted outside region
Pultenaea villifera	SI	Σ I	Σ I	5	southern limit, disjunct pop.
Rhagodia candolleana	DT	DT	DT	5	unusual habitat (non coastal)
Rulingia hermannifolia	SI	SI	SI	10	southern limit, disjunct pop.
Santalum obtusifolium	DT	DT	DT	5	regionally uncommon
Sarcomelicope simplicifolia	DT	ΔT	ΔT	5	regionally uncommon, southern limit
Sarochilus australis	DR	DR	DR	10	depleted in the wild, (threatened by collectors)
Sarochilus olivaceus	DR	DR	DR	10	southern limit, depleted in the wild (threatened by collectors)
Schizomeria ovata	VT	VT	VT	5	regionally uncommon, southern limit
Senecio glomeratus				5	taxonomic problems
Sicyos australis	DI	DI	DI	10	regionally uncommon
Spyridium cinereum	SI	SI	SI	5	nationally significant
Styphelia adscendens	SI	SI	SI	5	regionally uncommon
Styphelia psiloclada	SI	SI	SI	5	regionally uncommon
Symplocos thwaitesii	DT/DR	DT/DR	DT/DR	5	regionally uncommon, local southern limit
Tetratheca subaphylla	Σ I	Σ I	Σ I	5	uncommon throughout distribution
Thysanotus patersonii	UI	UI	UI	5	regionally uncommon, unusual habitat

Tmesipteris ovata	ΔR	ΔR	ΔR	5	regionally uncommon
Tmesipteris truncata	ΔR	ΔR	ΔR	5	uncommon throughout distribution, southern limit
Trachymene humilis ssp. humilis	SI?	SI?	SI?	5	regionally uncommon
Trisetum spicatum	DT	DT	DT	5	regionally uncommon
Trochocarpa laurina	NR	WR	WR	5	regionally uncommon, southern limit, disjunct pop.
Viola caleyana	Σ I	Σ I	Σ I	5	regionally uncommon
Viola cleistogamoides	Σ I	Σ I	Σ I	Survey	regionally uncommon, northern limit
Wahlenbergia gloriosa	VT	VT	VT	5	regionally uncommon
Wahlenbergia luteola	VT	VT	VT	5	regionally uncommon
Wahlenbergia multicaulis	VT	VT	VT	Survey	regionally uncommon
Westringia davidii	SI	SI	SI	10	locally endemic
Westringia kydrensis	SI	SI	SI	10	endemic
Xanthorrhoea concava	UI	UI	UI	5	southern limit
Zieria buxijugum	SI	SI	SI	5	locally endemic
Zieria citriodora	SI	SI	SI	5	northern limit ,disjunct pop
Zieria formosa	SI	SI	SI	5	locally endemic
Zieria fraseri ssp. compacta	SI	SI	SI	5	regionally uncommon, southern limit
Zieria parrisiae	SI	SI	SI	5	locally endemic

Zornia dyctyocarpa var. dyctyocarpa	Σ I	Σ I	Σ I	10	regionally uncommon, depleted in the wild, southern limit

APPENDIX EIGHT: FLORA SPECIES MANAGEMENT, SURVEY & MONITORING RECOMMENDATIONS

The following recommendations for individual species was compiled from the workshops (Dwight 1997). For species not listed in this Appendix, no specific recommendations were made, apart from the target population numbers indicated in Appendix Seven.

SPECIES FROM THE 'C' FUNCTIONAL GROUP

Hakea macreana Logging is not a serious threat, species is adequately reserved as there are five populations already in reserve, can not consider logging as contributing to 90% decline. The major consideration must be fire.

Leptospermum scoparium Ten populations already reserved. Logging is not an issue, avoid repeated fires.

SPECIES FROM THE 'R' & 'DR' FUNCTIONAL GROUPS

Asplenium australasicum - There are a handful of rainforest sites in the north of the region. All populations need some sort of reservation. Eight sites are recorded.

Atherosperma moschatum - This species is recorded at Mt Dromedary. This is a questionable record, that is outside the Eden CRA region. This record should be checked for the Southern CRA.

Cymbidium suave - Reservation and management by prescription may be a better option than just reservation. Target ten populations and implement a prescription that logging operations are to avoid damaging mature plants.

Dendrobium aemulum - A prescription for pre logging survey of mature ironbarks in coastal forests north of Bega,. is needed in harvesting plans.

Korthalsella rubra - usually grows on *Acmena smithi*. There are sites in Nullica SF and Nadgee SF (probably Maxwells Ck). There is only one population in Nullica SF on the database. More sites are needed for protection. Target all known sites.

Nothothixos subaureus - probably only three populations known.

Pittosporum bicolor - Although this species is represented in reserves, it was included for assessment on the basis of there only being small populations in the region. Target ten populations.

Platycerium bifurcatum ssp. bifurcatum Bunga Head is the only known locality in the regions. This population and *Asplenium australasicum* and *Dendrobium aemulum* should be monitored for pilfering at Bunga Head.

Sarochilus australis - There are under ten known populations. This species is depleted in the wild and threatened by collectors.

Sarochilus olivaceus - There are under ten known populations. This species is depleted in the wild and threatened by collectors.

Symplocos thwaitesii There are two known populations. Numbulla SF and Tanja SF (in wet gullies).

SPECIES FROM THE 'ΔR' FUNCTIONAL GROUP

These are slightly more resistant, so the target does not need to be pushed above five populations.

Lycopodium myrtifolium - grows in rock crevices or is epithytic in rainforest. There are less than five known populations.

Tmesipteris ovata - There are less than five known populations.Probably occurs at Maxwells Ck Flora Reserve.

Tmesipteris truncata - There are less than five known populations.

SPECIES FROM THE 'N' FUNCTIONAL GROUP

Cassinia cunninghamii - One known record for the Bermagui Eden area.. This record has no accurate locality details. Survey for this species is required. If more than five localities are found for this species, it should be in the 'D' functional group rather than the 'N' group.

Cassinia uncata - Only two records are known. for this species.

SPECIES WITH A SMALL AREA OF OCCUPANCY (LOCAL POPULATIONS) AND SUSCEPTIBILE TO SOIL DISTURBANCE

Austalopyrum pectinatum - This is a perennial grass which has only been found at one site in the Eden region. It is found on black soil, rock screes. Target all known localities.

Pentapogon quadrifidus - One or two records known. Occurs at Wog Wog Station.

SPECIES OF THE 'T' FUNCTIONAL GROUP

Reservation is not necessarily appropriate. This group needs management prescriptions, as the aim for preservation is not to exclude certain disturbances.

Actinotus gibbonsii - Insufficient information is known. Survey recommended. The heaths around Bombala might be worth surveying, preferably less than 12 months after fire.

Ammobium alatum - Only one record known, which was considered to probably have been brought in on a gravel truck. Not picked up in surveys where it would be expected to occur. This species was given a low priority for survey.

Ammobium alatum - This species was not considered due to there being taxonomic problems relating to this species.

Asterolasia astericophora - Less than five known populations.

Astroloma pinifolum - Less than five known populations. Nelson Beach occurrence is probably on a coastal dune. There are also sporadic occurrences on sandy granite country. Target five populations and possibly implement general surveys and pre logging surveys.

Boronia nana var. hyssopicfolia - Less than five known populations. Five populations is considered adequate. This species is not considered threatened as it occurs in high altitude swamps.

Boronia rigens - Target five populations.

Botrychium australe - Occurs in open situations in swampy areas. Fairly random where it occurs. Target five (two on private land). This species is covered by the functional group management prescription to avoid clearing for all 'UT's'.

Bracteantha viscosa - Less than five known populations.

Burnettia cuneata - Coastal saprophytic heath plant, that is not susceptible to soil disturbance. It is probably under-recorded, as it is hard to find. Recommend surveys after intense wildfires. Probably adequately conserved, as there is good representation of coastal heath in reserves. Target five populations. Recommend prescription of excluding vehicles from swampy heath vegetation.

Caladenia clarkiae - No data.

Caladenia sp. aff. reticulata - One known locality.

Caladenia tesselata - More information is needed.

Caustis recurvata - There is a single infertile specimen in State Forests herbarium at Eden, collected from Nadgee State Forest. There is doubt about the identitiy of this specimen. Because of the uncertain identification and lack of precise locality data, Doug Binns suggests that this record be ignored for the RFA process.

Chorizema parvifolium - Hard to find if not flowering, unsure of habitat, recommend survey.

Comesperma sphaerocarpa - Less than five known populations.

Cryptostylis hunteriana - Target five populations in dedicated reserves and five in management reserves.

Desmodium brachypodium - Lot of records, virtually all in the Bega valley. This species has similar threats as for *Sicyos australis*. There are few records in reserves and it occurs mainly on private land. Target remnant *Ficus spp*. patches in the Bega Valley and Brogo area. Target ten populations.

Epilobium pallidiflorum - Less than five known populations. Occurs in swampy areas.

Festuca asperula, F eriopoda, F hookeriana, Poa cheelii P costiniana. All these species are common elsewhere, but are at the edge of their range in the Eden region. They are resilient and are likely to be under recorded. These species should be targeted by anyone who is already doing surveys, with particular emphasis on *Festuca* species.

Gaultheria appressa Not likely to be disturbed as it occurs in rocky areas. Target five populations.

Lasiopetalum parvifolium - Less than five populations are known.

Leptorhynchos nitidulus - one known population. The single specimen was collected on a roadside within 12 months of a severe wildfire. This record could be ignored for the CRA, or at least given a low priority for further survey.

Logania pusilla - Probably under recorded. Leave target at five.

Lotus australis - Survey required.

Mazus pumillo - This species is probably under-recorded. Target of five is adequate.

Monotoca albens - Less than five known populations.

Opercularia diphylla - No reliable data available.

Oxylobium scandens var. scandens - Depleted in the wild. Survey required.

Ozothamnus conditus - Less than five known populations.

Pimelea curviflora spp. gracilis var. sericea - Occurs as remnant patches in woodland that is grazed. Target ten populations.

Psoralea adscendens - Fairly common in parts of pine plantation near Coolangubrra and is considered quite resilient (eg. occurs by roadsides). At least 7 or 8 localities are recorded. Species is at eastern limit. Five populations is an adequate target. Recommend implementing a prescription to avoid clearing and control grazing and weeds.

Rhagodia candolleana - This species normally occurs on coastal dunes. There are less than five populations known in non coastal localities. There are populations on private land in dry rainforest. Target all of these non coastal populations.

Santalum obtusifolium - Individuals tend to be isolated, dispersal is widespread and the species is not long lived. The panel considered that management prescription would be a suitable conservation action. Five populations should be targetted for reserves and extensive wildfire should be excluded from reserves. There should also be localised exclusion of earthworks and hazard reduction burning (including logging at the coupe scale).

Sicyos australis - This species occurs mainly on private land and there are few recorded in reserves. The dry rainforest habbit is not common and was considered to be threatened. Target remnant *Ficus spp*. patches in Bega Valley and Brogo area. Target ten populations.

Thysanotus patersonii - The coastal heath habitat is unusual for this species, as it is more typically found in inland habitats. Target five populations.

Trachymene humilis ssp. humilis - Two known populations. Target five populations.

Trisetum spicatum - Less than five known populations.

Viola caleyana - Less than five known populations. Occurs in swampy areas.

Viola cleistogamoides - The only record of this species is at Wonbyon and there is no accurate locality data for this location. Survey recommended.

Whalenbergia luteola - Less than five known populations.

Whalenbergia multicaulis - No reliable records were available.

Zornia dyctyocarpa var. dyctyocarpa - There are one or two known localities that have probably been cleared. Target ten populations.

SPECIES WITH HABITAT RESTRICTED TO FRAGMENTED AREAS, AND SUSCEPTIBLE TO HABITAT LOSS AND; SPECIES WITH DISTRIBUTION RESTRICTED TO LESS THAN 10KM^2

Allocasuarina diminuta ssp. annectens - Recommend survey to assess further distribution.

Correa baeuerlenii - Some sort of reservation is needed on the largest population, but not necessarily the elimination of disturbance. Monitoring is needed to determine which management regime is most appropriate.

Dodonaea triangularis - No accurate data. Recommend survey.

Eucalyptus bauerlenii - Depleted in the wild. There are five locations in reserves. Target five good examples of this community into the reserve system. Target five additional populations for representation of the species and consider private land in meeting these targets.

Eucalyptus melliodora - Similar recommendations as for *E.bauerlenii.*

Eucalyptus parvula - Threatened by clearing for power lines, seed collectors etc. Target 10 populations.

Eucalyptus tereticornis - Similar requirements as for *E.bauerlenii*. Target the small area of basalt near Yellow Pinch dam as one of the 10 populations.

Grevilea mucronulata - Only one population is known. This site is probably still crown land. This is the dominant shrub in a small area. Recommend preserve.

Leucopogon setiger - Five known localities, low risk habitat (rhyolite outcrops). Target of five is adequate.

Pultenaea hispidula - Only two known locations. This species is disjunct and has a small range within the region. Detailed survey of patch of crown land at Tuross is needed (AMG 761500 5919800).

Pultenaea villifera - Target five populations. There is a recent record of a 100 plant population in Murrah State Forest (Ross Peacock). One of the Murrah populations should be included in the target of five.

Westringia davidii - Restricted distribution on rhyolite outcrops. Target 10 populations.

Westringia kydrensis Local endemic. Target of 10 populations probably will never be met.

Assuming adequate management actions have been recommended for each functional group, the target for the rest of the species should be five populations.

RECOMMENDATIONS FOR SURVEY

The expert panel recommended that surveys be conducted for the following species.

Actinotus gibbonsii Possibly survey the heaths around Bombala. Survey less than 12 months after fire.

Allocasuarina diminuta ssp. annectens

Ammobium alatum low priority for survey.

Astroloma pinifolum Possible survey and pre logging surveys.

Atherosperma moschatum Check Mt Dromedary record for Southern CRA.

Cassinia cunninghamii Only one known population.

Caustis recurvata

Chorizema parvifolium Hard to find if not flowering, experts were unsure of habitat.

Dendrobium aemulum

Dodonaea triangularis No accurate data, recommend survey.

Festuca asperula, Festuca eriopoda, Festuca hookeriana, Poa cheelii, Poa costiniana These species should be targeted in any survey, with particular emphasis on *Festuca* species.

Korthaisella rubra

Lasiopetalum parvifolium

Lotus australis

Opercularia diphylla

Oxylobium scandens var. scandens

Pultenaea hispidula Detailed survey of patch of crown land at Tuross needed (AMG 761500 5919800).

Trochocarpa laurina Only one record, with no accurate location data.

Viola cleistogamoides

Whalenbergia multicaulis No reliable records available.

MONITORING OF THE FOLLOWING SPECIES WAS RECOMMENDED

Correa baeuerlenii Monitoring is needed to determine which management regime is most appropriate, for this species.

Platycerium bifurcatum ssp. bifurcatum Bunga Head is the only known locality in the Eden region. This population should be

monitored for pilfering. *Asplenium australasicum* and *Dendroium aemulum* should be also be monitored for pilfering at Bunga head.