

# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 3: Damp Sands Herb-rich Woodland

#### Description:

A low, grassy or bracken-dominated eucalypt forest or open woodland to 15 m tall with a large shrub layer and ground layer rich in herbs, grasses, and orchids. Occurs mainly on flat or undulating areas on moderately fertile, relatively well-drained, deep sandy or loamy topsoils over heavier subsoils (duplex soils).

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus melliodora</i>	Yellow Box
	<i>Eucalyptus goniocalyx</i> s.l.	Bundy

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	4	20%	MS
Prostrate Shrub	1	1%	PS
Large Herb	2	5%	LH
Medium Herb	6	15%	MH
Small or Prostrate Herb	5	10%	SH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	7	20%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Scrambler or Climber	2	5%	SC
Ground Fern	1	10%	GF
Bryophytes/Lichens	na	10%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
T	<i>Acacia mearnsii</i>	Black Wattle
MS	<i>Kunzea ericoides</i>	Burgan
MS	<i>Acacia paradoxa</i>	Hedge Wattle
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
PS	<i>Astroloma humifusum</i>	Cranberry Heath
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Drosera peltata</i> ssp. <i>auriculata</i>	Tall Sundew
MH	<i>Viola hederacea</i> sensu <i>Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Geranium solanderi</i> s.l.	Austral Cranesbill
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Kennedia prostrata</i>	Running Postman
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Poranthera microphylla</i>	Small Poranthera
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Austrodanthonia penicillata</i>	Slender Wallaby-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Clematis microphylla</i>	Small-leaved Clematis

# EVC 3: Damp Sands Herb-rich Woodland Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

40 % cover

**Logs:**

15 m/0.1 ha.

**Weediness:**

<b>LF Code</b>	<b>Typical Weed Species</b>	<b>Common Name</b>	<b>Invasive</b>	<b>Impact</b>
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MTG	<i>Ehrharta erecta var. erecta</i>	Panic Veldt-grass	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 7: Clay Heathland

### Description:

Occurs on sites with impeded drainage, often on duplex soils. Dominated by heathy shrub species with occasional emergent eucalypts. The ground layer is dense and diverse with a variety of landforms.

### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	9	30%	MS
Small Shrub	6	10%	SS
Prostrate Shrub	3	5%	PS
Medium Herb	8	10%	MH
Large Tufted Graminoid	4	10%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	7	10%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Hakea sericea s.l.</i>	Bushy Needlewood
MS	<i>Cassinia longifolia</i>	Shiny Cassinia
SS	<i>Dampiera stricta</i>	Blue Dampiera
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Gompholobium huegelii</i>	Common Wedge-pea
SS	<i>Rhytidosporum procumbens</i>	White Marianth
PS	<i>Acrotriche serrulata</i>	Honey-pots
PS	<i>Bossiaea prostrata</i>	Creeping Bossiaea
MH	<i>Lagenophora gracilis</i>	Slender Bottle-daisy
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Hypericum gramineum</i>	Small St John's Wort
SH	<i>Mitrasacme serpyllifolia</i>	Thyme Mitrewort
LTG	<i>Deyeuxia quadriseta</i>	Reed Bent-grass
LTG	<i>Xanthorrhoea minor ssp. lutea</i>	Small Grass-tree
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Schoenus apogon</i>	Common Bog-sedge
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Poa sieberiana var. sieberiana</i>	Grey Tussock-grass
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
MNG	<i>Caustis flexuosa</i>	Curly Wig

### Recruitment:

Episodic/Fire. Desirable period between disturbances is 30 years.

### Organic Litter:

20% Cover

### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

# EVC 7: Clay Heathland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 8: Wet Heathland

#### Description:

A low, generally treeless heathland although sometimes emergent eucalypts may be present. Occurs on lower slopes, flats or depressions, which are infertile and subjected to prolonged water logging. Understorey is often dominated by a range of sedges, grasses and shrubs.

#### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	7	30%	MS
Small Shrub	3	5%	SS
Large Herb	2	5%	LH
Medium Herb	4	5%	MH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	3	10%	LNG
Medium to Small Tufted Graminoid	4	10%	MTG
Medium to Tiny Non-tufted Graminoid	3	10%	MNG
Ground Fern	1	1%	GF
Scrambler or Climber	2	10%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Hakea nodosa</i>	Yellow Hakea
MS	<i>Melaleuca squarrosa</i>	Scented Paperbark
MS	<i>Leptospermum lanigerum</i>	Woolly Tea-tree
SS	<i>Bauera rubioides</i>	Wiry Bauera
PS	<i>Xanthosia dissecta s.l.</i>	Cut-leaf Xanthosia
LH	<i>Xyris operculata</i>	Tall Yellow-eye
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Selaginella uliginosa</i>	Swamp Selaginella
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LTG	<i>Deyeuxia quadriseta</i>	Reed Bent-grass
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
LNG	<i>Austrostipa muelleri</i>	Wiry Spear-grass
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
LNG	<i>Baumea rubiginosa s.l.</i>	Soft Twig-rush
MTG	<i>Lepidosperma filiforme</i>	Common Rapier-sedge
MTG	<i>Tetraria capillaris</i>	Hair Sedge
MTG	<i>Patersonia fragilis</i>	Short Purple-flag
MNG	<i>Empodisma minus</i>	Spreading Rope-rush
MNG	<i>Baumea tetragona</i>	Square Twig-sedge
MNG	<i>Poa tenera</i>	Slender Tussock-grass
GF	<i>Lindsaea linearis</i>	Screw Fern
SC	<i>Gleichenia dicarpa</i>	Pouched Coral-fern
SC	<i>Cassytha glabella</i>	Slender Dodder-laurel

#### Recruitment:

Episodic/Fire. Desirable period between disturbances is 30 years.

#### Organic Litter:

20% cover

#### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

# EVC 8: Wet Heathland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 15: Limestone Box Forest

### Description:

Occurs on generally well developed terra rossa soils derived from Tertiary limestones that outcrop around coastal streams, gullies and lakes. Open eucalypt forest to 20 m tall with a tall shrub layer understorey and a grass and herb-rich ground layer on sheltered aspects but may be almost completely bare on drier aspects.

### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus botryoides</i> <i>Eucalyptus baueriana</i>	Southern Mahogany Blue Box

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	15%	T
Medium Shrub	5	15%	MS
Small Shrub	1	1%	SS
Large Herb	2	1%	LH
Medium Herb	8	10%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	2	5%	LNG
Medium to Small Tufted Graminoid	4	5%	MTG
Medium to Tiny Non-tufted Graminoid	3	5%	MNG
Ground Fern	3	15%	GF
Scrambler or Climber	6	10%	SC
Bryophytes/Lichens	na	10%	BL

# EVC 15: Limestone Box Forest Highlands - Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Rapanea howittiana</i>	Mutton-wood
T	<i>Pomaderris aspera</i>	Hazel Pomaderris
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Melaleuca ericifolia</i>	Swamp Paperbark
MS	<i>Cassinia longifolia</i>	Shiny Cassinia
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Solanum prinophyllum</i>	Forest Nightshade
MH	<i>Geranium potentilloides</i>	Cinquefoil Cranesbill
MH	<i>Veronica calycina</i>	Hairy Speedwell
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Oxalis corniculata</i> s.l.	Yellow Wood-sorrel
SH	<i>Desmodium gunnii</i>	Southern Tick-trefoil
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Gahnia melanocarpa</i>	Black-fruit Saw-sedge
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Schoenus apogon</i>	Common Bog-sedge
MTG	<i>Dianella caerulea</i> var. <i>caerulea</i>	Paroo Lily
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
MNG	<i>Oplismenus hirtellus</i>	Australian Basket-grass
MNG	<i>Poa tenera</i>	Slender Tussock-grass
MNG	<i>Echinopogon ovatus</i>	Common Hedgehog-grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Calochlaena dubia</i>	Common Ground-fern
GF	<i>Pellaea falcata</i> s.l.	Sickle Fern
GF	<i>Adiantum aethiopicum</i>	Common Maidenhair
SC	<i>Tylophora barbata</i>	Bearded Tylophora
SC	<i>Eustrephus latifolius</i>	Wombat Berry
SC	<i>Glycine clandestina</i>	Twining Glycine
SC	<i>Clematis glycinoides</i> var. <i>glycinoides</i>	Forest Clematis

**Recruitment:**  
Continuous

**Organic Litter:**  
40 % cover

**Logs:**  
15 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 16: Lowland Forest

#### Description:

Eucalypt forest to 25 m tall on relatively fertile, moderately well-drained soils in areas of relatively high rainfall. Characterised by the diversity of life forms and species in the understorey including a range of shrubs, grasses and herbs.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus sieberi</i>	Silvertop Ash
	<i>Eucalyptus dives</i>	Broad-leaved Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	9	30%	MS
Small Shrub	3	5%	SS
Prostrate Shrub	2	1%	PS
Large Herb	2	1%	LH
Medium Herb	5	10%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	2	10%	LNG
Medium to Small Tufted Graminoid	4	10%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	2	10%	GF
Scrambler or Climber	2	1%	SC
Bryophytes/Lichens	na	10%	BL

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Pultenaea gunnii</i>	Golden Bush-pea
MS	<i>Acacia mucronata</i> ssp. <i>longifolia</i>	Narrow-leaf Wattle
SS	<i>Amperea xiphoclada</i> var. <i>xiphoclada</i>	Broom Spurge
SS	<i>Lomatia ilicifolia</i>	Holly Lomatia
PS	<i>Acrotriche prostrata</i>	Trailing Ground-berry
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
SH	<i>Goodenia lanata</i>	Trailing Goodenia
LTG	<i>Xanthorrhoea minor</i> ssp. <i>lutea</i>	Small Grass-tree
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
MTG	<i>Poa australis</i> spp. <i>agg.</i>	Tussock Grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Dianella revoluta</i> s.l.	Black-anther Flax-lily
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Lindsaea linearis</i>	Screw Fern
SC	<i>Billardiera scandens</i>	Common Apple-berry

# EVC 16: Lowland Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

40 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 18: Riparian Forest

#### Description:

A tall forest along river banks and associated alluvial terraces with occasional occurrences in the heads of gullies leading into creeks and rivers. The soil is fertile alluvium, regularly inundated and permanently moist. Dominated by tall eucalypts to 30 m tall, but also has an open to sparse secondary tree layer of wattles and scattered dense patches of shrubs, ferns, grasses and herbs.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus obliqua</i> <i>Eucalyptus viminalis</i>	Messmate Stringybark Manna Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	20%	T
Medium Shrub	8	20%	MS
Small Shrub	1	1%	SS
Prostrate Shrub	1	1%	PS
Large Herb	2	1%	LH
Medium Herb	6	10%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	3	10%	LTG
Large Non-tufted Graminoid	2	5%	LNG
Medium to Small Tufted Graminoid	3	5%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	5	20%	GF
Tree Fern	1	10%	TRF
Scrambler or Climber	3	5%	SC
Bryophytes/Lichens	na	20%	BL

# EVC 18: Riparian Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Pomaderris aspera</i>	Hazel Pomaderris
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Prostanthera lasianthos</i>	Victorian Christmas-bush
MS	<i>Goodenia ovata</i>	Hop Goodenia
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
MH	<i>Viola hederacea sensu Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
MH	<i>Geranium potentilloides</i>	Cinquefoil Cranesbill
SH	<i>Oxalis corniculata s.l.</i>	Yellow Wood-sorrel
LTG	<i>Carex appressa</i>	Tall Sedge
LTG	<i>Lepidosperma elatius</i>	Tall Sword-sedge
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Poa australis spp. agg.</i>	Tussock Grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Isolepis inundata</i>	Swamp Club-sedge
MNG	<i>Poa tenera</i>	Slender Tussock-grass
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
GF	<i>Blechnum nudum</i>	Fishbone Water-fern
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Blechnum wattsii</i>	Hard Water-fern
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
SC	<i>Clematis aristata</i>	Mountain Clematis

## Recruitment:

Continuous

## Organic Litter:

50 % cover

## Logs:

30 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rubus fruticosus spp. agg.</i>	Blackberry	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Prunella vulgaris</i>	Self-heal	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 19: Riparian Shrubland

#### Description:

Diverse, medium to tall shrubland to 8 m tall occurring on rocky substrates of major streams and banks and channels of rocky creeks and along perennial streams in gorge tracts. Able to withstand frequent flooding or regenerate rapidly after such disturbance and often forming dense thickets along the stream's edge during long periods without flooding. Trees may be irregularly scattered throughout but tend to be restricted to the banks of the rivers and creeks. Sedges and rushes common to riparian environments dominate the understorey as well as an array of herbs and grasses including many ephemeral species which survive on the bare sands or in rock crevice.

#### Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Acacia melanoxylon</i>	Blackwood
	<i>Acacia silvestris</i>	Red Wattle

#### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	4	20%	MS
Small Shrub	1	5%	SS
Large Herb	5	5%	LH
Medium Herb	4	10%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	1	10%	LTG
Medium to Small Tufted Graminoid	1	1%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	6	15%	GF
Tree Fern	1	1%	TRF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	20 %	BL
<b>Total understorey projective foliage cover</b>		<b>85%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Cassinia longifolia</i>	Shiny Cassinia
MS	<i>Goodia lotifolia</i>	Golden Tip
MS	<i>Prostanthera lasianthos</i>	Victorian Christmas-bush
SS	<i>Rubus parvifolius</i>	Small-leaf Bramble
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
LH	<i>Urtica incisa</i>	Scrub Nettle
MH	<i>Geranium potentilloides</i>	Cinquefoil Cranesbill
MH	<i>Poranthera microphylla</i>	Small Poranthera
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Oxalis corniculata s.l.</i>	Yellow Wood-sorrel
SH	<i>Chiloglottis gunnii s.l.</i>	Common Bird-orchid
LTG	<i>Carex polyantha</i>	River Sedge
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MNG	<i>Luzula campestris spp. agg.</i>	Field Woodrush
GF	<i>Doodia australis</i>	Common Rasp-fern
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Hypolepis muelleri</i>	Harsh Ground-fern
GF	<i>Blechnum nudum</i>	Fishbone Water-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
SC	<i>Cassytha melantha</i>	Coarse Dodder-laurel
SC	<i>Clematis aristata</i>	Mountain Clematis



# EVC 19: Riparian Shrubland Highlands – Southern Fall bioregion

## Recruitment:

Continuous

## Organic Litter:

40% cover

## Logs:

10 m/0.1 ha (note: large log class does not apply)

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rosa rubiginosa</i>	Sweet Briar	low	high
MS	<i>Rubus fruticosus</i> spp. agg.	Blackberry	high	high
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
LH	<i>Sonchus asper</i> s.l.	Rough Sow-thistle	high	low
LH	<i>Solanum nigrum</i> sensu Willis (1972)	Black Nightshade	high	high
LH	<i>Conyza bonariensis</i>	Flaxleaf Fleabane	high	high
LH	<i>Centaureum tenuiflorum</i>	Slender Centaury	high	low
LH	<i>Verbena bonariensis</i> s.l.	Purple-top Verbena	high	high
LH	<i>Hypericum perforatum</i>	St John's Wort	high	high
LH	<i>Carduus tenuiflorus</i>	Winged Thistle	high	high
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
LH	<i>Carduus pycnocephalus</i>	Slender Thistle	high	high
LH	<i>Verbascum virgatum</i>	Twiggy Mullein	high	high
MH	<i>Stellaria media</i>	Chickweed	high	low
MH	<i>Trifolium striatum</i>	Knotted Clover	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Petrorhagia nanteuilii</i>	Childling Pink	high	low
MH	<i>Anagallis arvensis</i>	Pimpernel	high	low
MH	<i>Arenaria leptoclados</i>	Lesser Thyme-leaved Sandwort	high	low
MH	<i>Trifolium arvense</i> var. <i>arvense</i>	Hare's-foot Clover	high	low
MH	<i>Trifolium dubium</i>	Suckling Clover	high	low
MH	<i>Linaria pelisseriana</i>	Pelisser's Toad-flax	high	low
MH	<i>Hypochoeris glabra</i>	Smooth Cat's-ear	high	low
MH	<i>Acetosella vulgaris</i>	Sheep Sorrel	high	high
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low
MH	<i>Gamochaeta purpurea</i> s.l.	Purple Cudweed	high	low
MH	<i>Arctotheca calendula</i>	Cape Weed	high	low
MH	<i>Trifolium campestre</i> var. <i>campestre</i>	Hop Clover	high	low
MH	<i>Euphorbia lathyris</i>	Caper Spurge	high	high
MH	<i>Silene gallica</i>	French Catchfly	high	low
MH	<i>Prunella vulgaris</i>	Self-heal	high	high
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
MH	<i>Polycarpon tetraphyllum</i>	Four-leaved Allseed	high	low
SH	<i>Trifolium glomeratum</i>	Cluster Clover	high	low
SH	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	high	high
SH	<i>Medicago polymorpha</i>	Burr Medic	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Poa annua</i>	Annual Meadow-grass	high	low
MTG	<i>Bromus diandrus</i>	Great Brome	high	low
MTG	<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome	high	low
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MNG	<i>Aira caryophyllea</i>	Silvery Hair-grass	high	low
SC	<i>Galium aparine</i>	Cleavers	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 20: Heathy Dry Forest

#### Description:

Grows on shallow, rocky skeletal soils on a variety of geologies and on a range of landforms from gently undulating hills to exposed aspects on ridge tops and steep slopes at a range of elevations. The overstorey is a low, open eucalypt forest, poor in form to 20 m tall with an open crown cover. The understorey is dominated by a low, sparse to dense layer of ericoid-leaved shrubs including heaths and peas. Graminoids and grasses are frequently present in the ground layer, but do not provide much cover.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	60 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus dives</i>	Broad-leaved Peppermint
	<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	9	30%	MS
Small Shrub	4	15%	SS
Prostrate Shrub	2	5%	PS
Large Herb	2	5%	LH
Medium Herb	5	10%	MH
Small or Prostrate Herb	1	5%	SH
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	6	20%	MTG
Ground Fern	2	5%	GF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Monotoca scoparia</i>	Prickly Broom-heath
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Daviesia ulicifolia</i>	Gorse Bitter-pea
MS	<i>Persoonia confertiflora</i>	Cluster-flower Geebung
SS	<i>Dillwynia phyllicoides</i>	Small-leaf Parrot-pea
SS	<i>Tetralochea ciliata</i>	Pink-bells
SS	<i>Hovea heterophylla</i>	Common Hovea
SS	<i>Hibbertia obtusifolia</i>	Grey Guinea-flower
PS	<i>Platylobium formosum</i>	Handsome Flat-pea
PS	<i>Acrotriche serrulata</i>	Honey-pots
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Dianella revoluta</i> s.l.	Black-anther Flax-lily
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
MTG	<i>Poa australis</i> spp. agg.	Tussock Grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Cassytha pubescens</i> s.s.	Downy Dodder-laurel
SC	<i>Hardenbergia violacea</i>	Purple Coral-pea

# EVC 20: Heathy Dry Forest Highlands – Southern Fall bioregion

**Recruitment:**

Episodic/Fire. Desirable period between disturbances is 20 years.

**Organic Litter:**

20 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 21: Shrubby Dry Forest

#### Description:

Occurs on a range of geologies on exposed aspects such as ridge-lines and medium to steep upper slopes, often in high rainfall areas and on shallow infertile soils. Open forest to 25 m tall characterised by the diversity and variability of the eucalypts. The understorey often lacks a secondary tree layer but contains a well-developed medium to low shrub layer. The ground layer is often very sparse with tussock-forming graminoids being the dominant life form.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum
	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	8	30%	MS
Small Shrub	3	15%	SS
Prostrate Shrub	1	1%	PS
Large Herb	4	5%	LH
Medium Herb	8	10%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	4	15%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	2	10%	GF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

T	<i>Pomaderris aspera</i>	Hazel Pomaderris
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Pimelea axiflora</i>	Bootlace Bush
MS	<i>Olearia phlogopappa</i>	Dusty Daisy-bush
MS	<i>Acacia mucronata</i> ssp. <i>longifolia</i>	Narrow-leaf Wattle
SS	<i>Olearia megalophylla</i>	Large-leaf Daisy-bush
SS	<i>Tetraloche pilosa</i>	Hairy Pink-bells
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Viola hederacea</i> sensu <i>Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Veronica calycina</i>	Hairy Speedwell
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Clematis aristata</i>	Mountain Clematis

# EVC 21: Shrubby Dry Forest Highlands – Southern Fall bioregion

**Recruitment:**

Episodic/Fire. Desirable period between disturbances is 20 years.

**Organic Litter:**

30 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Cerastium glomeratum s.l.</i>	Common Mouse-ear Chickweed	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 22: Grassy Dry Forest

#### Description:

Occurs on a variety of gradients and altitudes and on a range of geologies. The overstorey is dominated by a low to medium height open forest of eucalypts to 20 m tall, sometimes resembling a woodland. The understorey usually consists of a sparse shrub layer of medium height. Grassy Dry Forest is characterised by a ground layer dominated by a high diversity of drought-tolerant grasses and herbs, often including a suite of fern species.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	60 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus macrorhyncha</i>	Red Stringybark
	<i>Eucalyptus goniocalyx s.l.</i>	Bundy
	<i>Eucalyptus polyanthemus</i>	Red Box

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	7	10%	MS
Small Shrub	4	10%	SS
Prostrate Shrub	2	1%	PS
Large Herb	2	1%	LH
Medium Herb	11	20%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	1	5%	LTG
Medium to Small Tufted Graminoid	7	25%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	1	5%	GF
Scrambler or Climber	3	5%	SC
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

# EVC 22: Grassy Dry Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Acacia genistifolia</i>	Spreading Wattle
MS	<i>Daviesia leptophylla</i>	Narrow-leaf Bitter-pea
MS	<i>Correa reflexa</i>	Common Correa
SS	<i>Hovea heterophylla</i>	Common Hovea
SS	<i>Dillwynia cinerascens s.l.</i>	Grey Parrot-pea
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Leucopogon virgatus</i>	Common Beard-heath
PS	<i>Acrotriche serrulata</i>	Honey-pots
PS	<i>Astroloma humifusum</i>	Cranberry Heath
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Hypericum gramineum</i>	Small St John's Wort
MH	<i>Viola hederacea sensu Willis (1972)</i>	Ivy-leaf Violet
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Oxalis exilis</i>	Shady Wood-sorrel
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
MTG	<i>Dianella revoluta s.l.</i>	Black-anther Flax-lily
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
SC	<i>Hardenbergia violacea</i>	Purple Coral-pea
SC	<i>Billardiera scandens</i>	Common Apple-berry
SC	<i>Comesperma volubile</i>	Love Creeper

## Recruitment:

Continuous

## Organic Litter:

20 % cover

## Logs:

20 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	high
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 23: Herb-rich Foothill Forest

#### Description:

Occurs on relatively fertile, moderately well-drained soils on an extremely wide range of geological types and in areas of moderate to high rainfall. Occupies easterly and southerly aspects mainly on lower slopes and in gullies. A medium to tall open forest to 25 m tall with a large shrub or understorey tree layer over a sparse to dense medium shrub layer. A high cover and diversity of herbs and grasses in the ground layer which characterises this EVC.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus radiata</i> s.l. <i>Eucalyptus obliqua</i> <i>Eucalyptus cypellocarpa</i>	Narrow-leaf Peppermint Messmate Stringybark Mountain Grey-gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	7	20%	MS
Small Shrub	2	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	4	5%	LH
Medium Herb	11	20%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	2	5%	LNG
Medium to Small Tufted Graminoid	5	20%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	3	10%	GF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	20%	BL

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Olearia phlogopappa</i>	Dusty Daisy-bush
SS	<i>Olearia megalophylla</i>	Large-leaf Daisy-bush
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Veronica calycina</i>	Hairy Speedwell
SH	<i>Galium propinquum</i>	Maori Bedstraw
SH	<i>Dichondra repens</i>	Kidney-weed
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Billardiera scandens</i>	Common Apple-berry

# EVC 23: Herb-rich Foothill Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

40 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 27: Blackthorn Scrub

#### Description:

Occurs on northerly and westerly slopes of mountains and valleys. Trees are not a prominent feature, often present only as emergents or forming a very open woodland. The small tree or large shrub layer to 10 m tall is a dominant feature, often forming even-aged stands of uniform height. The ground layer is generally sparse and species-poor due to low site quality and the density of the overstorey. Vines can be conspicuous in the understorey.

#### Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Acacia silvestris</i>	Red Wattle
	<i>Pomaderris aspera</i>	Hazel Pomaderris
	<i>Exocarpos cupressiformis</i>	Cherry Ballart

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	5	20%	MS
Medium Herb	2	1%	MH
Medium to Small Tufted Graminoid	3	5%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	2	5%	GF
Scrambler or Climber	2	1%	SC
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C
<b>Total understorey projective foliage cover</b>		<b>45%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Philotheca trachyphylla</i>	Rock Wax-flower
MS	<i>Cassinia trinerva</i>	Three-nerved Cassinia
MS	<i>Kunzea ericoides</i>	Burgan
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
MH	<i>Stellaria flaccida</i>	Forest Starwort
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Notodanthonia longifolia</i>	Long-leaf Wallaby-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Asplenium flabellifolium</i>	Necklace Fern
SC	<i>Pandorea pandorana</i>	Wonga Vine

#### Recruitment:

Continuous

#### Organic Litter:

40 % cover

#### Logs:

10 m/0.1 ha. (note: large log class does not apply)

#### Weediness:

There are no consistent weeds in this EVC.



# EVC 27: Blackthorn Scrub Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 28: Rocky Outcrop Shrubland

### Description:

Occurs in areas of low site quality on exposed rocky outcrops where rock is a dominant landform feature, soils are shallow or virtually absent and effective rainfall is low. Scattered, often stunted trees are occasionally present. A diverse shrub layer to 4 m tall characterises this EVC, including a number of rock-adapted species. The ground layer is usually sparse and species-poor except where it occurs in discrete patches and forms a mosaic with Rocky Outcrop Herbland.

### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	7	25%	MS
Small Shrub	2	5%	SS
Prostrate Shrub	1	5%	PS
Large Herb	2	5%	LH
Medium Herb	2	1%	MH
Large Tufted Graminoid	1	5%	LTG
Medium to Small Tufted Graminoid	4	10%	MTG
Ground Fern	1	1%	GF
Bryophytes/Lichens	na	20%	BL
Soil Crust	na	10%	S/C
<b>Total understorey projective foliage cover</b>		<b>70%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Kunzea ambigua</i>	White Kunzea
MS	<i>Callistemon pallidus</i>	Lemon Bottlebrush
MS	<i>Spyridium parvifolium</i>	Dusty Miller
SS	<i>Hibbertia obtusifolia</i>	Grey Guinea-flower
SS	<i>Phyllanthus hirtellus</i>	Thyme Spurge
SS	<i>Hibbertia riparia</i>	Erect Guinea-flower
LH	<i>Stypantra glauca</i>	Nodding Blue-lily
LH	<i>Wahlenbergia gracilis</i> s.l.	Sprawling Bluebell
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Pomax umbellata</i>	Pomax
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Leucochrysum albicans</i>	Hoary Sunray
MH	<i>Isotoma axillaris</i>	Rock Isotome
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Dianella revoluta</i> s.l.	Black-anther Flax-lily
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
GF	<i>Cheilanthes austrotenuifolia</i>	Green Rock-fern
SC	<i>Cassytha melantha</i>	Coarse Dodder-laurel
SC	<i>Hardenbergia violacea</i>	Purple Coral-pea

### Recruitment:

Continuous

### Organic Litter:

40 % cover

### Logs:

10 m/0.1 ha.

### Weediness:

There are no consistent weeds in this EVC.

# EVC 28: Rocky Outcrop Shrubland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 29: Damp Forest

#### Description:

Grows on a wide range of geologies on well-developed generally colluvial soils on a variety of aspects, from sea level to montane elevations. Dominated by a tall eucalypt tree layer to 30 m tall over a medium to tall dense shrub layer of broad-leaved species typical of wet forest mixed with elements from dry forest types. The ground layer includes herbs and grasses as well as a variety of moisture-dependent ferns including occasional tree ferns.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum
	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus globulus</i> ssp. <i>bicostata</i>	Eurabbie

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	20%	T
Medium Shrub	7	25%	MS
Small Shrub	1	1%	SS
Medium Herb	4	5%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	1	10%	LNG
Medium to Small Tufted Graminoid	1	1%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	3	15%	GF
Tree Fern	2	10%	TRF
Scrambler or Climber	3	5%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Pomaderris aspera</i>	Hazel Pomaderris
T	<i>Acacia dealbata</i>	Silver Wattle
MS	<i>Goodenia ovata</i>	Hop Goodenia
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
SS	<i>Platylobium formosum</i>	Handsome Flat-pea
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Gonocarpus humilis</i>	Shade Raspwort
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
MH	<i>Geranium potentilloides</i>	Cinquefoil Cranesbill
LTG	<i>Lepidosperma elatius</i>	Tall Sword-sedge
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Blechnum wattsii</i>	Hard Water-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Billardiera scandens</i>	Common Apple-berry

# EVC 29: Damp Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

50 % cover

**Logs:**

30 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 30: Wet Forest

#### Description:

Grows on fertile, well-drained loamy soils on a range of geologies and elevation levels. It is largely restricted to protected sites in gullies and on southern aspects of hills and mountains where rainfall is high and cloud cover at ground level is frequent. Characterised by a tall eucalypt overstorey to 30 m tall with scattered understorey trees over a tall broad-leaved shrubby understorey and a moist, shaded, fern-rich ground layer that is usually dominated by tree-ferns.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus regnans</i>	Mountain Ash

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	7	30%	T
Medium Shrub	5	20%	MS
Large Herb	1	1%	LH
Medium Herb	3	5%	MH
Small or Prostrate Herb	1	1%	SH
Large Tufted Graminoid	1	1%	LTG
Large Non-tufted Graminoid	1	10%	LNG
Medium to Small Tufted Graminoid	1	1%	MTG
Ground Fern	4	20%	GF
Tree Fern	2	20%	TRF
Epiphyte	1	1%	EP
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	20%	BL

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

T	<i>Pomaderris aspera</i>	Hazel Pomaderris
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Olearia argophylla</i>	Musk Daisy-bush
MS	<i>Polyscias sambucifolia</i>	Elderberry Panax
MS	<i>Correa lawrenceana</i>	Mountain Correa
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Hedycarya angustifolia</i>	Austral Mulberry
LH	<i>Sambucus gaudichaudiana</i>	White Elderberry
MH	<i>Viola hederacea sensu Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
MH	<i>Australina pusilla ssp. muelleri</i>	Shade Nettle
LTG	<i>Lepidosperma elatius</i>	Tall Sword-sedge
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Blechnum wattsii</i>	Hard Water-fern
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Histiopteris incisa</i>	Bat's Wing Fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Billardiera longiflora var. longiflora</i>	Purple Apple-berry

# EVC 30: Wet Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

50 % cover

**Logs:**

30 m/0.1 ha.

**Weediness:**

There are no consistent weeds in this EVC.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 31: Cool Temperate Rainforest

#### Description:

Closed forest to 25 m tall with occasional emergent eucalypts. Occurs in high rainfall areas protected from fire within Wet Forest. The understorey characterised by tree ferns and a rich epiphytic flora. The ground layer is dominated by a diversity of ground ferns.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Nothofagus/Atherosperma</i>	70 cm	20 / ha
<i>Eucalyptus</i> spp.	90 cm	

#### Tree Canopy Cover:

%cover	Character Species	Common Name
50%	<i>Nothofagus cunninghamii</i>	Myrtle Beech
	<i>Atherosperma moschatum</i>	Southern Sassafras
	<i>Eucalyptus regnans</i>	Mountain Ash
	<i>Acacia melanoxylon</i>	Blackwood

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	15%	T
Medium Shrub	3	10%	MS
Large Herb	1	1%	LH
Medium Herb	3	10%	MH
Large Non-tufted Graminoid	1	1%	LNG
Ground Fern	6	35%	GF
Tree Fern	2	25%	TRF
Epiphyte	4	5%	EP
Scrambler or Climber	2	1%	SC
Bryophytes/Lichens	na	20%	BL

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

T	<i>Pittosporum bicolor</i>	Banyalla
MS	<i>Hedycarya angustifolia</i>	Austral Mulberry
MS	<i>Tasmannia lanceolata</i>	Mountain Pepper
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MH	<i>Australina pusilla</i> ssp. <i>muelleri</i>	Shade Nettle
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Sambucus gaudichaudiana</i>	White Elderberry
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MNG	<i>Uncinia tenella</i>	Delicate Hook-sedge
GF	<i>Blechnum watsii</i>	Hard Water-fern
GF	<i>Grammitis billardierei</i>	Common Finger-fern
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Asplenium bulbiferum</i> ssp. <i>gracillimum</i>	Mother Spleenwort
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
EP	<i>Microsorium pustulatum</i> ssp. <i>pustulatum</i>	Kangaroo Fern
EP	<i>Crepidomanes venosum</i>	Veined Bristle-fern
EP	<i>Hymenophyllum australe</i>	Austral Filmy Fern
EP	<i>Hymenophyllum flabellatum</i>	Shiny Filmy Fern
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Parsonsia brownii</i>	Twining Silkpod

# EVC 31: Cool Temperate Rainforest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

80 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

There are no consistent weeds in this EVC.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 32: Warm Temperate Rainforest

### Description:

Closed forest to 25 m tall restricted to topographically protected sites in warm temperate climatic zones where it generally occupies gullies and slopes with southerly or easterly aspects. Dominated by a range of non-eucalypt canopy species above an understorey of smaller trees and shrubs and usually visually dominated by ferns and climbers.

### Large trees:

Species	DBH(cm)	#/ha
Various spp.	70 cm	20 / ha

### Tree Canopy Cover:

%cover	Character Species	Common Name
50%	<i>Acmena smithii</i>	Lilly Pilly
	<i>Acacia melanoxylon</i>	Blackwood
	<i>Elaeocarpus reticulatus</i>	Blue Oliveberry
	<i>Rapanea howittiana</i>	Muttonwood

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	30%	T
Medium Shrub	2	10%	MS
Large Herb	2	5%	LH
Medium Herb	3	5%	MH
Small or Prostrate Herb	1	5%	SH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	1	1%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	4	25%	GF
Epiphyte	1	5%	EP
Scrambler or Climber	7	20%	SC
Bryophytes/Lichens	na	20%	BL



# EVC 32: Warm Temperate Rainforest Highlands - Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Olearia argophylla</i>	Musk Daisy-bush
T	r <i>Acronychia oblongifolia</i>	Yellow-wood
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Cassinia trinerva</i>	Three-nerved Cassinia
LH	<i>Urtica incisa</i>	Scrub Nettle
MH	<i>Sambucus gaudichaudiana</i>	White Elderberry
MH	<i>Stellaria flaccida</i>	Forest Starwort
MH	<i>Austrocynoglossum latifolium</i>	Forest Hound's-tongue
SH	<i>Pyrrosia rupestris</i>	Rock Felt-fern
SH	<i>Dichondra repens</i>	Kidney-weed
LTG	<i>Gahnia melanocarpa</i>	Black-fruit Saw-sedge
MNG	<i>Oplismenus hirtellus</i>	Australian Basket-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Asplenium flabellifolium</i>	Necklace Fern
GF	<i>Pellaea falcata</i> s.l.	Sickle Fern
GF	<i>Lastreopsis acuminata</i>	Shiny Shield-fern
GF	<i>Pteris tremula</i>	Tender Brake
EP	<i>Microsorium scandens</i>	Fragrant Fern
SC	<i>Eustrephus latifolius</i>	Wombat Berry
SC	<i>Clematis glycinoides</i> var. <i>glycinoides</i>	Forest Clematis
SC	<i>Geitonoplesium cymosum</i>	Scrambling Lily
SC	<i>Smilax australis</i>	Austral Sarsaparilla

**Recruitment:**  
Continuous

**Organic Litter:**  
50 % cover

**Logs:**  
20 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Solanum nigrum</i> sensu Willis (1972)	Black Nightshade	high	low
SC	<i>Asparagus asparagoides</i>	Bridal Creeper	high	high

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## EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands - Southern Fall bioregion

### EVC 33: Cool Temperate Rainforest/Warm Temperate Rainforest

#### Description:

Closed forest to 20m tall restricted to deeply incised river valleys of moderate gradient and associated steep gullies in rugged mountain country on a variety of southerly aspects at an elevation of 650 to 750 m. Dominated by a range of non-eucalypt canopy species above an understorey of smaller trees and shrubs and usually visually dominated by ferns and climbers.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Acmena/Elaeocarpus/Atherosperma/Pomaderris</i>	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
50%	<i>Acmena smithii</i>	Lilly Pilly
	<i>Atherosperma moschatum</i>	Southern Sassafras
	<i>Elaeocarpus holopetalus</i>	Black Oliveberry
	<i>Pomaderris aspera</i>	Hazel Pomaderris

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	5	25%	T
Medium Shrub	6	15%	MS
Large Herb	2	1%	LH
Medium Herb	3	5%	MH
Small or Prostrate Herb	1	1%	SH
Large Tufted Graminoid	2	1%	LTG
Large Non-tufted Graminoid	2	1%	LNG
Medium to Small Tufted Graminoid	2	5%	MTG
Ground Fern	8	25%	GF
Tree Fern	3	20%	TRF
Epiphyte	4	5%	EP
Scrambler or Climber	7	20%	SC
Bryophytes/Lichens	na	20%	BL

# EVC 33: Cool Temperate Rainforest/Warm Temperate Rainforest Overlap Highlands - Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia melanoxylon</i>	Blackwood
T	v <i>Eucryphia moorei</i>	Leatherwood
T	<i>Rapanea howittiana</i>	Muttonwood
T	<i>Pittosporum bicolor</i>	Banyalla
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Hedycarya angustifolia</i>	Austral Mulberry
MS	<i>Telopea oreodes</i>	Gippsland Waratah
MS	<i>Tasmania lanceolata</i>	Mountain Pepper
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Australina pusilla</i> ssp. <i>muelleri</i>	Shade Nettle
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Blechnum patersonii</i> ssp. <i>patersonii</i>	Strap Water-fern
GF	<i>Lastreopsis acuminata</i>	Shiny Shield-fern
GF	<i>Blechnum cartilagineum</i>	Gristle Fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
TRF	Rr <i>Cyathea cunninghamii</i>	Slender Tree-fern
TRF	r <i>Cyathea X. marcescens</i>	Skirted Tree-fern
EP	<i>Fieldia australis</i>	Fieldia
EP	<i>Grammitis billardieri</i>	Common Finger-fern
EP	<i>Hymenophyllum australe</i>	Austral Filmy Fern
EP	<i>Microsorium scandens</i>	Fragrant Fern
EP	<i>Microsorium pustulatum</i> ssp. <i>pustulatum</i>	Kangaroo Fern
SC	<i>Smilax australis</i>	Austral Sarsaparilla
SC	<i>Eustrephus latifolius</i>	Wombat Berry
SC	<i>Marsdenia rostrata</i>	Milk Vine
SC	<i>Clematis aristata</i>	Mountain Clematis

#### Recruitment:

Continuous

#### Organic Litter:

50 % cover

#### Logs:

20 m/0.1 ha.

#### Weediness:

There are no consistent weeds in this EVC.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 34: Dry Rainforest

### Description:

Open to closed non-eucalypt low forest or tall shrubland to 15 m tall. Occurs in areas of relatively low rainfall (750-900mm per annum) and primarily confined to topographic fire refuges most often associated with extensive cliffs, gorges and rock screens on northern and western aspects.

### Large trees:

Species	DBH(cm)	#/ha
Various spp.	60 cm	10 / ha

### Tree Canopy Cover:

%cover	Character Species	Common Name
50%	<i>Rapanea howittiana</i>	Mutton-wood
	<i>Pittosporum undulatum</i>	Sweet Pittosporum

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	20%	T
Medium Shrub	9	20%	MS
Large Herb	5	5%	LH
Medium Herb	12	15%	MH
Small or Prostrate Herb	5	5%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	3	5%	MTG
Medium to Tiny Non-tufted Graminoid	3	5%	MNG
Ground Fern	5	10%	GF
Epiphyte	2	1%	EP
Scrambler or Climber	6	10%	SC
Bryophytes/Lichens	na	20%	BL

### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rubus fruticosus</i> spp. agg.	Blackberry	high	high
LH	<i>Solanum nigrum</i> sensu Willis (1972)	Black Nightshade	high	low
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
LH	<i>Coryza</i> spp.	Fleabane	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Gamochaeta purpurea</i> s.l.	Purple Cudweed	high	low
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low
MH	<i>Polycarpon tetraphyllum</i>	Four-leaved Allseed	high	low
MH	<i>Hypochoeris glabra</i>	Smooth Cat's-ear	high	low
MH	<i>Galium murale</i>	Small Goosegrass	high	low
MH	<i>Anagallis arvensis</i>	Pimpernel	high	low
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MTG	<i>Ehrharta erecta</i> var. <i>erecta</i>	Panic Veldt-grass	high	high
MNG	<i>Aira praecox</i>	Early Hair-grass	high	low

# EVC 34: Dry Rainforest Highlands - Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Acacia implexa</i>	Lightwood
T	<i>Acacia falciformis</i>	Pale Hickory Wattle
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
MS	<i>Cassinia trinerva</i>	Three-nerved Cassinia
MS	<i>Cassinia longifolia</i>	Shiny Cassinia
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
LH	<i>Urtica incisa</i>	Scrub Nettle
LH	<i>Sigesbeckia orientalis</i> ssp. <i>orientalis</i>	Indian Weed
LH	<i>Senecio minimus</i>	Shrubby Fireweed
MH	<i>Solanum prinophyllum</i>	Forest Nightshade
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Sambucus gaudichaudiana</i>	White Elderberry
MH	<i>Lobelia anceps</i>	Angled Lobelia
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
SH	<i>Pyrosia rupestris</i>	Rock Felt-fern
SH	<i>Oxalis exilis</i>	Shady Wood-sorrel
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Lepidosperma urophorum</i>	Tailed Rapier-sedge
LTG	<i>Gahnia melanocarpa</i>	Black-fruit Saw-sedge
MTG	<i>Notodanthonia longifolia</i>	Long-leaf Wallaby-grass
MTG	r <i>Libertia paniculata</i>	Branching Grass-flag
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Poa hothamensis</i>	Ledge Grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
MNG	<i>Echinopogon ovatus</i>	Common Hedgehog-grass
MNG	<i>Oplismenus hirtellus</i>	Australian Basket-grass
MNG	<i>Entolasia marginata</i>	Bordered Panic
GF	<i>Pteris tremula</i>	Tender Brake
GF	<i>Asplenium flabellifolium</i>	Necklace Fern
GF	<i>Doodia australis</i>	Common Rasp-fern
GF	<i>Cheilanthes austrotenuifolia</i>	Green Rock-fern
EP	<i>Microsorium pustulatum</i> ssp. <i>pustulatum</i>	Kangaroo Fern
EP	<i>Hymenophyllum cupressiforme</i>	Common Filmy Fern
EP	<i>Sarcochilus australis</i>	Butterfly Orchid
SC	<i>Cassytha phaeolasia</i>	Rusty Dodder-laurel
SC	<i>Eustrephus latifolius</i>	Wombat Berry
SC	<i>Celastrus australis</i>	Staff Climber
SC	<i>Morinda jasminoides</i>	Jasmine Morinda

## Recruitment:

Continuous

## Organic Litter:

50 % cover

## Logs:

10 m/0.1 ha.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 35: Tableland Damp Forest

### Description:

Tall eucalypt forest to 30 m tall with an understorey dominated by a tall, diverse shrub layer of broad-leaved shrubs and heaths with sometimes a scattering of tree-ferns. The ground layer is dominated by a variety of herbs and graminoids. Occurs on topographically protected south-facing slopes and occasionally in gully heads on northern or western slopes in low relief montane areas.

### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus delegatensis</i> ssp. <i>delegatensis</i>	Alpine Ash

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	20%	T
Medium Shrub	7	20%	MS
Small Shrub	2	10%	SS
Large Herb	2	5%	LH
Medium Herb	8	15%	MH
Small or Prostrate Herb	2	15%	SH
Large Tufted Graminoid	1	5%	LTG
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	3	15%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	2	5%	GF
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Acacia obliquinervia</i>	Mountain Hickory Wattle
MS	<i>Polyscias sambucifolia</i>	Elderberry Panax
MS	<i>Coprosma hirtella</i>	Rough Coprosma
MS	<i>Olearia phlogopappa</i>	Dusty Daisy-bush
MS	<i>Cassinia aculeata</i>	Common Cassinia
SS	<i>Leucopogon hookeri</i>	Mountain Beard-heath
LH	<i>Derwentia derwentiana</i>	Derwent Speedwell
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Lagenophora stipitata</i>	Common Bottle-daisy
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
SH	<i>Leptinella filicula</i>	Mountain Cotula
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Poa ensiformis</i>	Sword Tussock-grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Polystichum proliferum</i>	Mother Shield-fern

# EVC 35: Tableland Damp Forest Highlands - Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

50 % cover

**Logs:**

30 m/0.1 ha.

**Weediness:**

There are no consistent weeds in this EVC.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 36: Montane Dry Woodland

### Description:

Occurs on dry and exposed mid to upper slopes at montane elevations, often extending onto ridges in high rainfall areas. Effective rainfall may be enhanced by cold air drainage, low cloud cover and in some cases, persistent snow cover. Open forest to open woodland to 15 m tall, according to altitude, precipitation and frequency of fire. The shrubby understorey is an unusual combination of species, which tolerate exposed montane conditions and species which enjoy the increased moisture available from cloud and fog drip.

### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	50 cm	15 / ha

### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus pauciflora</i>	Snow Gum
	<i>Eucalyptus dives</i>	Broad-leaved Peppermint
	<i>Eucalyptus rubida</i>	Candlebark
	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	20%	T
Mallee Tree	1	1%	MT
Medium Shrub	6	20%	MS
Small Shrub	2	5%	SS
Large Herb	2	5%	LH
Medium Herb	9	20%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	6	15%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	1	5%	GF
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

# EVC 36: Montane Dry Woodland Highlands - Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Acacia obliquinervia</i>	Mountain Hickory Wattle
MS	<i>Coprosma hirtella</i>	Rough Coprosma
MS	<i>Polyscias sambucifolia</i>	Elderberry Panax
MS	<i>Daviesia ulicifolia</i>	Gorse Bitter-pea
MS	<i>Cassinia aculeata</i>	Common Cassinia
SS	<i>Olearia erubescens</i>	Moth Daisy-bush
SS	<i>Leucopogon hookeri</i>	Mountain Beard-heath
SS	<i>Platylobium formosum</i>	Handsome Flat-pea
SS	<i>Tetratheca labillardierei</i>	Glandular Pink-bells
LH	<i>Derwentia derwentiana</i>	Derwent Speedwell
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
LH	<i>Chrysocephalum semipapposum</i>	Clustered Everlasting
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Asperula scoparia</i>	Prickly Woodruff
SH	<i>Leptinella filicula</i>	Mountain Cotula
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Deyeuxia frigida</i>	Forest Bent-grass
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
MTG	<i>Poa labillardierei</i>	Common Tussock-grass
MNG	<i>Luzula campestris</i> spp. agg.	Field Woodrush
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
SC	<i>Clematis aristata</i>	Mountain Clematis

## Recruitment:

Continuous

## Organic Litter:

20 % cover

## Logs:

15 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 37: Montane Grassy Woodland

#### Description:

Occurs in montane elevations on moderately fertile soils on all aspects. An open eucalypt woodland to 10 m tall, sometimes with a secondary tree layer. The understorey often consists of a sparse shrub layer which can be variable in height. The EVC is characterised by its grassy ground cover together with a variety of other graminoids and herbs.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	50 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus pauciflora</i>	Snow Gum
	<i>Eucalyptus dives</i>	Broad-leaved Peppermint
	<i>Eucalyptus rubida</i>	Candlebark

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	6	20%	MS
Small Shrub	3	10%	SS
Prostrate Shrub	2	5%	PS
Large Herb	2	5%	LH
Medium Herb	15	20%	MH
Small or Prostrate Herb	3	10%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	7	20%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	1	1%	GF
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C



# EVC 37: Montane Grassy Woodland Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Pultenaea juniperina</i> s.l.	Prickly Bush-pea
MS	<i>Pimelea linifolia</i>	Slender Rice-flower
MS	<i>Brachyloma daphnoides</i>	Daphne Heath
SS	<i>Hibbertia obtusifolia</i>	Grey Guinea-flower
SS	<i>Olearia erubescens</i>	Moth Daisy-bush
SS	<i>Leucopogon hookeri</i>	Mountain Beard-heath
PS	<i>Platylobium formosum</i>	Handsome Flat-pea
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Wahlenbergia stricta</i>	Tall Bluebell
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Viola betonicifolia</i> ssp. <i>betonicifolia</i>	Showy Violet
MH	<i>Stellaria pungens</i>	Prickly Starwort
SH	<i>Chiloglottis gunnii</i> s.l.	Common Bird-orchid
SH	<i>Galium ciliare</i>	Hairy Bedstraw
SH	<i>Leptinella filicula</i>	Mountain Cotula
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Deyeuxia quadriseta</i>	Reed Bent-grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Luzula meridionalis</i> var. <i>flaccida</i>	Common Woodrush
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Glycine clandestina</i>	Twining Glycine

## Recruitment:

Continuous

## Organic Litter:

20 % cover

## Logs:

15 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low
MH	<i>Centaurium erythraea</i>	Common Centaury	high	low
MH	<i>Prunella vulgaris</i>	Self-heal	high	low
MH	<i>Taraxacum officinale</i> spp. agg.	Garden Dandelion	high	low
SH	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 38: Montane Damp Forest

#### Description:

Grows on a wide range of geologies on well-developed generally colluvial soils on a variety of aspects at montane elevations. Dominated by a tall eucalypt tree layer to 30 m tall over a medium to tall dense shrub layer of broad-leaved species typical of wet forest mixed with elements from dry forest types. The ground layer includes herbs and grasses as well as a variety of moisture-dependent ferns.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum
	<i>Eucalyptus obliqua</i>	Messmate
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	25%	T
Medium Shrub	7	25%	MS
Small Shrub	3	10%	SS
Prostrate Shrub	1	1%	PS
Large Herb	3	5%	LH
Medium Herb	10	15%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	1	5%	LTG
Medium to Small Tufted Graminoid	4	10%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	2	10%	GF
Scrambler or Climber	1	5%	SC
Bryophytes/Lichens	na	20%	BL

# EVC 38: Montane Damp Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Eucalyptus dives</i>	Broad-leaved Peppermint
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Coprosma hirtella</i>	Rough Coprosma
MS	<i>Polyscias sambucifolia</i>	Elderberry Panax
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Persoonia confertiflora</i>	Cluster-flower Geebung
SS	<i>Tetralochea ciliata</i>	Pink-bells
SS	<i>Olearia erubescens</i>	Moth Daisy-bush
SS	<i>Olearia myrsinoides</i>	Silky Daisy-bush
SS	<i>Hibbertia obtusifolia</i>	Grey Guinea-flower
PS	<i>Platylobium formosum</i>	Handsome Flat-pea
LH	<i>Derwentia derwentiana</i>	Derwent Speedwell
LH	<i>Senecio quadridentatus</i>	Cotton Fireweed
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
LH	<i>Chrysocephalum semipapposum</i>	Clustered Everlasting
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Lagenophora stipitata</i>	Common Bottle-daisy
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
SH	<i>Oxalis corniculata</i> s.l.	Yellow Wood-sorrel
SH	<i>Leptinella filicula</i>	Mountain Cotula
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Poa australis</i> spp. agg.	Tussock Grass
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Dianella revoluta</i> s.l.	Black-anther Flax-lily
MNG	<i>Luzula campestris</i> spp. agg.	Field Woodrush
MNG	<i>Deyeuxia rodwayi</i>	Tasman Bent-grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Glycine clandestina</i>	Twining Glycine

**Recruitment:**  
Continuous

**Organic Litter:**  
50 % cover

**Logs:**  
30 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 39: Montane Wet Forest

#### Description:

Grows on the most sheltered wet sites such as gully heads and south facing slopes at montane elevations in high rainfall areas. Soils are deep, fertile, well-drained and structureless and although well-drained, may remain saturated for long periods. The overstorey forms a tall open eucalypt forest to 30 m tall over a secondary tree layer with occasional tall shrubs which provide shade and protection for a fern-rich ground layer. Scattered herbs occur in gaps in the ground layer.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus regnans</i> <i>Eucalyptus nitens</i>	Mountain Ash Shining Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	5	20%	T
Medium Shrub	5	25%	MS
Large Herb	2	5%	LH
Medium Herb	5	15%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	1	1%	LTG
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	1	5%	MTG
Ground Fern	3	25%	GF
Tree Fern	2	5%	TRF
Scrambler or Climber	2	1%	SC
Bryophytes/Lichens	na	20%	BL

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Olearia argophylla</i>	Musk Daisy-bush
MS	<i>Olearia phlogopappa</i>	Dusty Daisy-bush
MS	<i>Polyscias sambucifolia</i>	Elderberry Panax
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Tasmannia lanceolata</i>	Mountain Pepper
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
LH	<i>Mentha laxiflora</i>	Forest Mint
MH	<i>Sambucus gaudichaudiana</i>	White Elderberry
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
MH	<i>Viola hederacea sensu Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Stellaria flaccida</i>	Forest Starwort
SH	<i>Leptostigma reptans</i>	Dwarf Nertera
LTG	<i>Dryopoa dives</i>	Giant Mountain-grass
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Poa ensiformis</i>	Sword Tussock-grass
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Histiopteris incisa</i>	Bat's Wing Fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
SC	<i>Clematis aristata</i>	Mountain Clematis

# EVC 39: Montane Wet Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

50 % cover

**Logs:**

30 m/0.1 ha.

**Weediness:**

There are no consistent weeds in this EVC.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 40: Montane Riparian Woodland

#### Description:

Associated with the peat-rich flats of perennial, meandering streams which flow through Montane Dry Woodland at montane elevations. Open woodland to 15 m tall with a dense riparian shrub layer lining the smaller creeks but on the larger streams may be largely un-treed. The ground layer contains a dense sward of grasses, herbs and sedges often associated with creeks or river margins.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	60 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
15%	<i>Eucalyptus viminalis</i>	Manna Gum
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus camphora</i> ssp. <i>humeana</i>	Mountain Swamp Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	15%	T
Medium Shrub	5	10%	MS
Large Herb	6	10%	LH
Medium Herb	10	15%	MH
Small or Prostrate Herb	4	5%	SH
Large Tufted Graminoid	3	25%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	3	10%	MTG
Ground Fern	4	15%	GF
Tree Fern	1	1%	TRF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	20%	BL

# EVC 40: Montane Riparian Woodland Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia melanoxylon</i>	Blackwood
T	<i>Acacia dealbata</i>	Silver Wattle
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Olearia alpicola</i>	Alpine Daisy-bush
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Prostanthera rotundifolia</i>	Round-leaf Mint-bush
SS	<i>Tetradlea ciliata</i>	Pink-bells
LH	<i>Epilobium billardierianum</i> ssp. <i>cinereum</i>	Grey Willow-herb
LH	<i>Senecio glomeratus</i>	Annual Fireweed
LH	<i>Veronica gracilis</i>	Slender Speedwell
LH	<i>Persicaria praetermissa</i>	Spotted Knotweed
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
SH	<i>Callitriche</i> spp.	Water Starwort
SH	<i>Hypericum japonicum</i>	Matted St John's Wort
SH	<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort
LTG	<i>Carex appressa</i>	Tall Sedge
LTG	<i>Cyperus lucidus</i>	Leafy Flat-sedge
LTG	<i>Juncus pallidus</i>	Pale Rush
LTG	<i>Deyeuxia brachyathera</i>	Short Bent-grass
LNG	<i>Phragmites australis</i>	Common Reed
MTG	<i>Poa australis</i> spp. agg.	Tussock Grass
MTG	<i>Isolepis subtilissima</i>	Mountain Club-sedge
MTG	<i>Rytidosperma nudiflorum</i>	Alpine Wallaby-grass
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Blechnum nudum</i>	Fishbone Water-fern
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Blechnum wattsii</i>	Hard Water-fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Calystegia marginata</i>	Forest Bindweed

## Recruitment:

Continuous

## Organic Litter:

40 % cover

## Logs:

15 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rosa rubiginosa</i>	Sweet Briar	low	high
MS	<i>Rubus fruticosus</i> spp. agg.	Blackberry	high	high
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
LH	<i>Hypericum perforatum</i>	St John's Wort	high	high
MH	<i>Prunella vulgaris</i>	Self-heal	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Mimulus moschatus</i>	Musk Monkey-flower	high	low
SH	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 41: Montane Riparian Thicket

### Description:

Occurs in montane and sub-alpine areas, often within Montane Damp Forest along drainage lines, streams with gentle gradients and in soaks at the heads of gullies on south-facing aspects. The waterlogged soils are colluviums or alluviums rich in organic matter and it is a closed shrubland to 8 m tall in structure, often forming a narrow, linear strip. The understorey consists of a variety of shade-tolerant species. Along the stream flats ferns are the common life form while sedges, grasses and herbs form a sparse but diverse ground layer.

### Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Leptospermum grandifolium</i>	Mountain Tea-tree
	<i>Nothofagus cunninghamii</i>	Myrtle Beech

### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	1	5%	MS
Small or Prostrate Herb	1	1%	SH
Large Tufted Graminoid	2	40%	LTG
Medium to Small Tufted Graminoid	2	1%	MTG
Ground Fern	3	20%	GF
Tree Fern	1	5%	TRF
Epiphyte	2	1%	EP
Bryophytes/Lichens	na	20 %	BL
<b>Total understorey projective foliage cover</b>		<b>90%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Tasmannia lanceolata</i>	Mountain Pepper
SH	<i>Chiloglottis gunnii</i> s.l.	Common Bird-orchid
SH	<i>Chiloglottis cornuta</i>	Green Bird-orchid
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LTG	<i>Juncus usitatus</i>	Billabong Rush
MTG	<i>Isolepis subtilissima</i>	Mountain Club-sedge
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	r <i>Carex alsophila</i>	Forest Sedge
GF	<i>Grammitis billardierei</i>	Common Finger-fern
GF	<i>Blechnum wattsi</i>	Hard Water-fern
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Blechnum nudum</i>	Fishbone Water-fern
TRF	<i>Todea barbara</i>	Austral King-fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
EP	<i>Microsorium pustulatum</i> ssp. <i>pustulatum</i>	Kangaroo Fern
EP	<i>Hymenophyllum peltatum</i>	Alpine Filmy Fern

### Recruitment:

Continuous

### Organic Litter:

40 % cover

### Logs:

5 m/0.1 ha. (note: large log class does not apply)

### Weediness:

There are no consistent weeds in this EVC.

# EVC 41: Montane Riparian Thicket Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 43: Sub-alpine Woodland

### Description:

Grows on a wide range of geologies and aspects, in the higher altitudinal levels above 1200 m. Rainfall is relatively high and snow may persist for long periods over winter. Soils are generally skeletal sandy clay loams with a rich humus topsoil layer. A low, open woodland to 10 m tall dominated by Snow Gum *Eucalyptus pauciflora*, with the understorey variously consisting of a rich suite of grasses and herbs, or a dense layer of woody shrubs, depending on soil fertility.

### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	40 cm	15 / ha

### Tree Canopy Cover:

%cover	Character Species	Common Name
15%	<i>Eucalyptus pauciflora</i>	Snow Gum

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	5	20%	MS
Small Shrub	2	10%	SS
Large Herb	3	10%	LH
Medium Herb	8	20%	MH
Small or Prostrate Herb	2	5%	SH
Medium to Small Tufted Graminoid	4	20%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	1	1%	GF
Bryophytes/Lichens	na	20%	BL
Soil Crust	na	10%	S/C

### LF Code

### Species typical of at least part of EVC range

### Common Name

T	<i>Acacia obliquinervia</i>	Mountain Hickory Wattle
MS	<i>Podolobium alpestre</i>	Alpine Podolobium
MS	<i>Olearia phlogopappa</i>	Dusty Daisy-bush
MS	<i>Tasmannia xerophila</i>	Alpine Pepper
SS	<i>Leucopogon hookeri</i>	Mountain Beard-heath
LH	<i>Senecio gunnii</i>	Mountain Fireweed
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Oreomyrrhis eriopoda</i>	Australian Caraway
MH	<i>Viola betonicifolia</i> ssp. <i>betonicifolia</i>	Showy Violet
MH	<i>Asperula gunnii</i>	Mountain Woodruff
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Poa australis</i> spp. agg.	Tussock Grass
MTG	<i>Carex breviculmis</i>	Common Grass-sedge
GF	<i>Polystichum proliferum</i>	Mother Shield-fern



# EVC 43: Sub-alpine Woodland Highlands - Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

20 % cover

**Logs:**

10 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Acetosella vulgaris</i>	Sheep Sorrel	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 45: Shrubby Foothill Forest

#### Description:

Occurs on ridges and mainly on southern and eastern slopes in association with Damp Forest or Wet Forest on moderately fertile soils and at a range of elevations. The overstorey is a medium eucalypt forest to 25 m tall over an understorey characterised by a distinctive middle strata dominated by a diversity of narrow-leaved shrubs and a paucity of ferns, graminoids and herbs in the ground stratum.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus sieberi</i>	Silvertop Ash
	<i>Eucalyptus baxteri</i> s.l.	Brown Stringybark
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	8	35%	MS
Small Shrub	3	10%	SS
Prostrate Shrub	1	5%	PS
Medium Herb	3	5%	MH
Small or Prostrate Herb	1	1%	SH
Large Tufted Graminoid	2	5%	LNG
Large Non-tufted Graminoid	1	10%	LNG
Medium to Small Tufted Graminoid	2	5%	MTG
Ground Fern	2	10%	GF
Scrambler or Climber	1	1%	SC
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C
<b>Total understorey projective foliage cover</b>		<b>90%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
MS	<i>Spyridium parvifolium</i>	Dusty Miller
MS	<i>Goodenia ovata</i>	Hop Goodenia
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Correa reflexa</i>	Common Correa
SS	<i>Amperea xiphoclada</i> var. <i>xiphoclada</i>	Broom Spurge
SS	<i>Tetralochea ciliata</i>	Pink-bells
SS	<i>Lomatia ilicifolia</i>	Holly Lomatia
SS	R r <i>Tetralochea stenocarpa</i>	Long Pink-bells
PS	<i>Platylobium formosum</i>	Handsome Flat-pea
PS	<i>Acrotriche prostrata</i>	Trailing Ground-berry
MH	<i>Viola hederacea</i> sensu <i>Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Poa australis</i> spp. <i>agg.</i>	Tussock Grass
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Billardiera scandens</i>	Common Apple-berry

# EVC 45: Shrubby Foothill Forest Highlands – Southern Fall bioregion

**Recruitment:**

Episodic/Fire. Desirable period between disturbances is 30 years.

**Organic Litter:**

40 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

There are no consistent weeds in this EVC.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 47: Valley Grassy Forest

#### Description:

Occurs under moderate rainfall regimes of 700-800 mm per annum on fertile well-drained colluvial or alluvial soils on gently undulating lower slopes and valley floors. Open forest to 20 m tall may carry a variety of eucalypts, usually species, which prefer more moist or more fertile conditions over a sparse shrub cover. In season, a rich array of herbs, lilies, grasses and sedges dominate the ground layer but at the drier end of the spectrum the ground layer may be sparse and slightly less diverse, but with the moisture-loving species still remaining.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus melliodora</i>	Yellow Box
	<i>Eucalyptus rubida</i>	Candlebark
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus macrorhyncha</i>	Red Stringybark
	<i>Eucalyptus goniocalyx</i> s.l.	Long-leaf Box

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	15%	T
Medium Shrub	6	20%	MS
Small Shrub	3	5%	SS
Prostrate Shrub	2	1%	PS
Large Herb	3	5%	LH
Medium Herb	12	20%	MH
Small or Prostrate Herb	3	10%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	2	10%	LNG
Medium to Small Tufted Graminoid	7	20%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	1	5%	GF
Bryophytes/Lichens	na	20%	BL

# EVC 47: Valley Grassy Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Acacia genistifolia</i>	Spreading Wattle
MS	<i>Pultenaea gunnii</i>	Golden Bush-pea
MS	<i>Kunzea ericoides</i>	Burgan
SS	<i>Leucopogon virgatus</i>	Common Beard-heath
SS	<i>Dillwynia cinerascens</i> s.l.	Grey Parrot-pea
SS	<i>Dillwynia phyllicoides</i>	Small-leaf Parrot-pea
PS	<i>Acrotriche serrulata</i>	Honey-pots
PS	<i>Astroloma humifusum</i>	Cranberry Heath
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
LH	<i>Wahlenbergia stricta</i>	Tall Bluebell
MH	<i>Acaena echinata</i>	Sheep's Burr
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Poranthera microphylla</i>	Small Poranthera
MH	<i>Drosera peltata</i> ssp. <i>auriculata</i>	Tall Sundew
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
SH	<i>Drosera whittakeri</i> ssp. <i>aberrans</i>	Scented Sundew
SH	<i>Dichondra repens</i>	Kidneyweed
LTG	<i>Austrostipa rudis</i>	Veined Spear-grass
LTG	<i>Poa labillardierei</i>	Common Tussock-grass
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Lomandra filiformis</i> ssp. <i>coriacea</i>	Wattle Mat-rush
MTG	<i>Dianella revoluta</i> s.l.	Black-anther Flax-lily
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily
SC	<i>Comesperma volubile</i>	Love Creeper

## Recruitment:

Continuous

## Organic Litter:

20 % cover

## Logs:

20 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	high
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 48: Heathy Woodland

#### Description:

Spans a variety of geologies but is generally associated with nutrient-poor soils including deep uniform sands (aeolian or outwash) and Tertiary sand/clay which has been altered to form quartzite gravel. Eucalypt-dominated low woodland to 10 m tall lacking a secondary tree layer and generally supporting a diverse array of narrow or ericoid-leaved shrubs except where frequent fire has reduced this to a dense cover of bracken. Geophytes and annuals can be quite common but the ground cover is normally fairly sparse.

#### Large trees:

Species	DBH(cm)	# /ha
<i>Eucalyptus</i> spp.	50 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
10%	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	5	30%	MS
Small Shrub	5	20%	SS
Medium Herb	2	5%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	1	5%	LTG
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	1	1%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	1	5%	GF
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C
<b>Total understorey projective foliage cover</b>		<b>75%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Leptospermum myrsinoides</i>	Heath Tea-tree
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Monotoca scoparia</i>	Prickly Broom-heath
SS	<i>Amperea xiphoclada</i> var. <i>xiphoclada</i>	Broom Spurge
SS	<i>Leucopogon virgatus</i>	Common Beard-heath
SS	<i>Dillwynia glaberrima</i>	Smooth Parrot-pea
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
MNG	<i>Hypolaena fastigiata</i>	Tassel Rope-rush
SC	<i>Cassytha glabella</i>	Slender Dodder-laurel

# EVC 48: Heathy Woodland – Highlands Southern Fall bioregion

**Recruitment:**

Episodic/Fire. Desirable period between disturbances is 20 years.

**Organic Litter:**

40 % cover

**Logs:**

15 m/0.1 ha.

**Weediness:**

There are no consistent weeds in this EVC.

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 53: Swamp Scrub

### Description:

Closed scrub to 8 m tall at low elevations on alluvial deposits along streams or on poorly drained sites with higher nutrient availability. The vegetation characteristically lacks a eucalypt overstorey and is dominated by Swamp Paperbark *Melaleuca ericifolia* (or sometimes Woolly Tea-tree *Leptospermum lanigerum*) which often forms a dense thicket, out-competing other species. Where light penetrates to ground level, a moss/lichen/liverwort or herbaceous ground cover is often present. Dry variants have a grassy/herbaceous ground layer.

### Tree Canopy Cover:

%cover	Character Species	Common Name
50%	<i>Leptospermum lanigerum</i> <i>Melaleuca ericifolia</i>	Woolly Tea-tree Swamp Paperbark

### Life forms:

Life form	#Spp	%Cover	LF code
Medium Shrub	2	10%	MS
Small Shrub	2	1%	SS
Large Herb	2	5%	LH
Medium Herb	3	15%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	3	10%	LNG
Medium to Small Tufted Graminoid	2	5%	MTG
Medium to Tiny Non-tufted Graminoid	2	15%	MNG
Ground Fern	1	5%	GF
Scrambler or Climber	1	1%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
LH	<i>Lycopus australis</i>	Australian Gipsywort
LH	<i>Lythrum salicaria</i>	Purple Loosestrife
LH	<i>Persicaria praetermissa</i>	Spotted Knotweed
MH	<i>Hydrocotyle pterocarpa</i>	Wing Pennywort
MH	<i>Stellaria angustifolia</i>	Swamp Starwort
MH	<i>Lobelia anceps</i>	Angled Lobelia
SH	<i>Crassula helmsii</i>	Swamp Crassula
LTG	<i>Juncus procerus</i>	Tall Rush
LTG	<i>Poa labillardierei</i>	Common Tussock-grass
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
LNG	<i>Phragmites australis</i>	Common Reed
LNG	<i>Baumea rubiginosa s.l.</i>	Soft Twig-rush
MTG	<i>Triglochin procerum s.l.</i>	Water Ribbons
MTG	<i>Juncus gregiflorus</i>	Green Rush
MNG	<i>Eleocharis acuta</i>	Common Spike-sedge
GF	<i>Blechnum cartilagineum</i>	Gristle Fern
SC	<i>Calystegia sepium</i>	Large Bindweed

# EVC 53: Swamp Scrub Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

40 % cover

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 55: Plains Grassy Woodland

#### Description:

An open, eucalypt woodland to 15 m tall occurring on a number of geologies and soil types. Occupies poorly drained, fertile soils on flat or gently undulating plains at low elevations. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	80 cm	10 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus camaldulensis</i>	River Red-gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	2	10%	MS
Small Shrub	1	1%	SS
Prostrate Shrub	1	1%	PS
Large Herb	1	5%	LH
Medium Herb	10	20%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	1	10%	LNG
Medium to Small Tufted Graminoid	9	35%	MTG
Medium to Tiny Non-tufted Graminoid	2	10%	MNG
Bryophytes/Lichens	na	10%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Allocasuarina littoralis</i>	Black Sheoak
MS	<i>Kunzea ericoides</i>	Burgan
SS	<i>Pimelea humilis</i>	Common Rice-flower
PS	<i>Bossiaea prostrata</i>	Creeping Bossiaea
MH	<i>Hypericum gramineum</i>	Small St John's Wort
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Poranthera microphylla</i>	Small Poranthera
LTG	<i>Austrostipa rudis</i>	Veined Spear-grass
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Carex breviculmis</i>	Common Grass-sedge
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Schoenus apogon</i>	Common Bog-sedge
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass

#### Recruitment:

Continuous

#### Organic Litter:

10 % cover

#### Logs:

10 m/0.1 ha.



# EVC 55: Plains Grassy Woodland Highlands – Southern Fall bioregion

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MNG	<i>Romulea rosea</i>	Onion Grass	high	low
MNG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MNG	<i>Briza minor</i>	Lesser Quaking-grass	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 56: Floodplain Riparian Woodland

#### Description:

An open eucalypt woodland to 15 m tall over a medium to tall shrub layer with a ground layer consisting of amphibious and aquatic herbs and sedges. Occurs along the banks and floodplains of the larger meandering rivers and major creeks, often in conjunction with one or more floodplain wetland communities. Elevation and rainfall are relatively low and soils are fertile alluviums subject to periodic flooding and inundation.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	80 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus ovata</i>	Swamp Gum
	<i>Eucalyptus viminalis</i>	Manna Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	15%	T
Medium Shrub	3	10%	MS
Large Herb	4	10%	LH
Medium Herb	3	10%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	3	15%	LTG
Large Non-tufted Graminoid	3	20%	LNG
Medium to Small Tufted Graminoid	5	15%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Scrambler or Climber	3	10%	SC
Bryophytes/Lichens	na	10%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Melaleuca ericifolia</i>	Swamp Paperbark
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Bursaria spinosa ssp. spinosa</i>	Sweet Bursaria
MS	<i>Hymenanthera dentata</i> s.l.	Tree Violet
LH	<i>Senecio quadridentatus</i>	Cotton Fireweed
LH	<i>Senecio minimus</i>	Shrubby Fireweed
LH	<i>Senecio pinnatifolius</i>	Variable Groundsel
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Crassula helmsii</i>	Swamp Crassula
MH	<i>Persicaria decipiens</i>	Slender Knotweed
SH	<i>Dichondra repens</i>	Kidney-weed
LTG	<i>Juncus sarophorus</i>	Broom Rush
LTG	<i>Juncus gregiflorus</i>	Green Rush
LTG	<i>Carex appressa</i>	Tall Sedge
LTG	<i>Poa labillardierei</i>	Common Tussock-grass
LNG	<i>Phragmites australis</i>	Common Reed
LNG	<i>Schoenoplectus tabernaemontani</i>	River Club-sedge
MTG	<i>Juncus amabilis</i>	Hollow Rush
MTG	<i>Carex inversa</i>	Knob Sedge
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
SC	<i>Calystegia sepium</i>	Large Bindweed

#### Recruitment:

Episodic/Flood. Desirable period between disturbances is 10 years.

# EVC 56: Floodplain Riparian Woodland Highlands – Southern Fall bioregion

## Organic Litter:

40 % cover

## Logs:

30 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
T	<i>Fraxinus angustifolia</i> ssp. <i>angustifolia</i>	Desert Ash	high	high
T	<i>Salix fragilis</i>	Crack Willow	high	high
T	<i>Salix cinerea</i>	Grey Sallow	high	high
T	<i>Crataegus monogyna</i>	Hawthorn	high	high
MS	<i>Solanum pseudocapsicum</i>	Madeira Winter-cherry	high	high
MS	<i>Prunus cerasifera</i>	Cherry Plum	high	high
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
LH	<i>Solanum americanum</i>	Glossy Nightshade	high	high
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
LH	<i>Rorippa palustris</i>	Marsh Yellow-cress	high	high
LH	<i>Sonchus asper</i> s.l.	Rough Sow-thistle	high	low
LH	<i>Verbena bonariensis</i> s.l.	Purple-top Verbena	high	high
LH	<i>Aster subulatus</i>	Aster-weed	high	low
LH	<i>Rumex pulcher</i> ssp. <i>pulcher</i>	Fiddle Dock	high	low
LH	<i>Rumex crispus</i>	Curled Dock	high	high
LH	<i>Rumex conglomeratus</i>	Clustered Dock	high	high
LH	<i>Echium plantagineum</i>	Paterson's Curse	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Ranunculus repens</i>	Creeping Buttercup	high	high
MH	<i>Anagallis arvensis</i>	Pimpernel	high	low
MH	<i>Arctotheca calendula</i>	Cape Weed	high	low
MH	<i>Gamochaeta purpurea</i> s.l.	Purple Cudweed	high	low
MH	<i>Lotus corniculatus</i>	Bird's-foot Trefoil	high	low
MH	<i>Atriplex prostrata</i>	Hastate Orache	high	low
MH	<i>Stellaria media</i>	Chickweed	high	low
SH	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	high	low
SH	<i>Modiola caroliniana</i>	Red-flower Mallow	high	low
SH	<i>Callitriche stagnalis</i>	Common Starwort	high	low
LTG	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
LNG	<i>Pennisetum clandestinum</i>	Kikuyu	high	high
MTG	<i>Iris pseudacorus</i>	Yellow Flag Iris	high	high
MTG	<i>Paspalum dilatatum</i>	Paspalum	high	high
MTG	<i>Lolium perenne</i>	Perennial Rye-grass	high	high
MTG	<i>Cyperus eragrostis</i>	Drain Flat-sedge	high	high
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MTG	<i>Agrostis stolonifera</i>	Creeping Bent	high	high
MTG	<i>Setaria gracilis</i> var. <i>pauciseta</i>	Slender Pigeon Grass	high	low
MTG	<i>Bromus catharticus</i>	Prairie Grass	high	low
MTG	<i>Poa annua</i>	Annual Meadow-grass	high	low
MTG	<i>Lolium rigidum</i>	Wimmera Rye-grass	high	low
MTG	<i>Ehrharta erecta</i> var. <i>erecta</i>	Panic Veldt-grass	high	high
MTG	<i>Agrostis capillaris</i> s.l.	Brown-top Bent	high	high
MNG	<i>Dactylis glomerata</i>	Cocksfoot	high	high
MNG	<i>Leersia oryzoides</i>	Rice Cut-grass	high	high
MNG	<i>Paspalum distichum</i>	Water Couch	high	high
MNG	<i>Poa pratensis</i>	Kentucky Blue-grass	high	high
SC	<i>Rubus</i> sp. aff. <i>armeniacus</i>	Blackberry	high	high
SC	<i>Vinca major</i>	Blue Periwinkle	high	high
SC	<i>Tradescantia fluminensis</i>	Wandering Jew	high	high
SC	<i>Galium aparine</i>	Cleavers	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 59: Riparian Thicket

#### Description:

Dense thickets of Woolly Tea-tree *Leptospermum lanigerum* and/or Scented Paperbark *Melaleuca squarrosa* to 6 m tall with occasional emergent eucalypts that occur on broad beds of small streams or on regular flooded terraces of large streams and rivers. Ground layer is dominated by a number of ferns, tree-ferns and sedges.

#### Canopy Cover:

%cover	Character Species	Common Name
50%	<i>Leptospermum lanigerum</i>	Woolly Tea-tree
	<i>Melaleuca squarrosa</i>	Scented Paperbark

#### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	8	30%	MS
Small Shrub	3	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	2	5%	LH
Medium Herb	5	10%	MH
Small or Prostrate Herb	1	5%	SH
Large Tufted Graminoid	3	10%	LTG
Large Non-tufted Graminoid	2	5%	LNG
Medium to Small Tufted Graminoid	2	5%	MTG
Medium to Tiny Non-tufted Graminoid	3	15%	MNG
Ground Fern	3	10%	GF
Tree Fern	1	5%	TRF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Ozothamnus rosmarinifolius</i>	Rosemary Everlasting
MS	<i>Kunzea ericoides</i>	Burgan
SS	<i>Dampiera stricta</i>	Blue Dampiera
SS	<i>Amperea xiphioclada</i> var. <i>xiphioclada</i>	Broom Spurge
SS	<i>Acacia brownii</i>	Heath Wattle
PS	<i>Acrotriche prostrata</i>	Trailing Ground-berry
LH	<i>Senecio minimus</i>	Shrubby Fireweed
LH	<i>Epilobium pallidiflorum</i>	Showy Willow-herb
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
LTG	<i>Cyperus lucidus</i>	Leafy Flat-sedge
LTG	<i>Carex appressa</i>	Tall Sedge
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Lepidosperma filiforme</i>	Common Rapier-sedge
MNG	<i>Poa tenera</i>	Slender Tussock-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
MNG	<i>Baumea tetragona</i>	Square Twig-sedge
GF	<i>Gleichenia dicarpa</i>	Pouched Coral-fern
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Blechnum minus</i>	Soft Water-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
SC	<i>Billardiera scandens</i>	Common Apple-berry

# EVC 59: Riparian Thicket Highlands – Southern Fall bioregion

## Recruitment:

Continuous

## Organic Litter:

40 % cover

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
T	<i>Salix cinerea</i>	Grey Sallow	high	high
T	<i>Pinus radiata</i>	Radiata Pine	high	high
MS	<i>Prunus cerasifera</i>	Cherry Plum	high	high
MS	<i>Cotoneaster pannosus</i>	Velvet Cotoneaster	high	high
MS	<i>Erica lusitanica</i>	Spanish Heath	high	high
SS	<i>Rubus sp. aff. armeniacus</i>	Blackberry	high	high
LH	<i>Solanum nigrum sensu Willis (1972)</i>	Black Nightshade	high	low
MH	<i>Lotus suaveolens</i>	Hairy Bird's-foot Trefoil	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Prunella vulgaris</i>	Self-heal	high	low
SH	<i>Callitriche stagnalis</i>	Common Starwort	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 61: Box Ironbark Forest

#### Description:

Occurs on gently undulating rises, low hills and peneplains on infertile, often stony soils derived from a range of geologies. The open overstorey to 20 m tall consists of a variety of eucalypts, often including one of the Ironbark species. The mid storey often forms a dense to open small tree or shrub layer over an open ground layer ranging from a sparse to well-developed suite of herbs and grasses.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus polyanthemos</i>	Red Box
	<i>Eucalyptus macrorhyncha</i>	Red Stringybark
	<i>Eucalyptus goniocalyx s.l.</i>	Bundy
	<i>Eucalyptus tricarpa</i>	Red Ironbark

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	4	20%	MS
Small Shrub	3	10%	SS
Prostrate Shrub	2	1%	PS
Large Herb	2	5%	LH
Medium Herb	10	15%	MH
Small or Prostrate Herb	2	1%	SH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	5	10%	MTG
Ground Fern	1	1%	GF
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	20%	S/C
<b>Total understorey projective foliage cover</b>		<b>80%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Acacia genistifolia</i>	Spreading Wattle
MS	<i>Pultenaea gunnii</i>	Golden Bush-pea
MS	<i>Kunzea ericoides</i>	Burgan
MS	<i>Cassinia aculeata</i>	Common Cassinia
SS	<i>Dillwynia phyllicoides</i>	Small-leaf Parrot-pea
SS	<i>Leucopogon virgatus</i>	Common Beard-heath
SS	<i>Dillwynia cinerascens s.l.</i>	Grey Parrot-pea
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
LH	<i>Wahlenbergia stricta</i>	Tall Bluebell
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Glossodia major</i>	Wax-lip Orchid
MH	<i>Drosera peltata ssp. auriculata</i>	Tall Sundew
MH	<i>Poranthera microphylla</i>	Small Poranthera
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
MTG	<i>Lomandra filiformis ssp. filiformis</i>	Wattle Mat-rush
MTG	<i>Lomandra nana</i>	Dwarf Mat-rush
MTG	<i>Dianella revoluta s.l.</i>	Black-anther Flax-lily
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

# EVC 61: Box Ironbark Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

20 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 82: Riverine Escarpment Scrub

#### Description:

Shrubland to 10 m tall with occasional emergent eucalypts. Occurs on shallow colluvial soils along rocky cliffs and slopes associated with rivers and creeks and may extend onto alluvial terraces. Characterised by a dense medium to tall shrub layer over a ground layer which can range from low to high diversity and consist of a variety of graminoids and herbs. Ferns can often be a major component of the ground stratum.

#### Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Acacia dealbata</i>	Silver Wattle
	<i>Pomaderris aspera</i>	Hazel Pomaderris

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Shrub		5%	IT
Medium Shrub	10	25%	MS
Large Herb	4	5%	LH
Medium Herb	13	20%	MH
Small or Prostrate Herb	6	10%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	6	10%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	5	15%	GF
Scrambler or Climber	3	5%	SC
Bryophytes/Lichens	na	10%	BL

# EVC 82: Riverine Escarpment Scrub Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Pimelea axiflora</i>	Bootlace Bush
MS	<i>Prostanthera lasianthos</i>	Victorian Christmas-bush
SS	<i>Hibbertia obtusifolia</i>	Grey Guinea-flower
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Ajuga australis</i>	Austral Bugle
LH	<i>Xerochrysum bracteatum</i>	Golden Everlasting
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Euchiton collinus s.l.</i>	Clustered/Creeping Cudweed
MH	<i>Veronica calycina</i>	Hairy Speedwell
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Hypericum gramineum</i>	Small St John's Wort
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Oxalis exilis</i>	Shady Wood-sorrel
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
SH	<i>Desmodium gunnii</i>	Southern Tick-trefoil
LTG	<i>Carex appressa</i>	Tall Sedge
LTG	<i>Austrostipa rudis ssp. nervosa</i>	Veined Spear-grass
LTG	<i>Lomandra longifolia ssp. exilis</i>	Cluster-headed Mat-rush
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Carex breviculmis</i>	Common Grass-sedge
MTG	<i>Isolepis inundata</i>	Swamp Club-sedge
MTG	<i>Schoenus maschalinus</i>	Leafy Bog-sedge
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
MNG	<i>Echinopogon ovatus</i>	Common Hedgehog-grass
MNG	<i>Poa tenera</i>	Slender Tussock-grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Adiantum aethiopicum</i>	Common Maidenhair
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Pellaea falcata s.l.</i>	Sickle Fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
SC	<i>Clematis glycinoides var. glycinoides</i>	Forest Clematis

## Recruitment:

Continuous

## Organic Litter:

40 % cover

## Logs:

5 m/0.1 ha (note: large log class does not apply)

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rubus polyanthemus</i>	Blackberry	high	high
MS	<i>Rubus fruticosus spp. agg.</i>	Blackberry	high	high
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
MH	<i>Prunella vulgaris</i>	Self-heal	high	low
MH	<i>Gamochaeta purpurea s.l.</i>	Purple Cudweed	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 83: Swampy Riparian Woodland

#### Description:

Woodland to 15 m tall generally occupying low energy streams of the foothills and plains. The lower strata are variously locally dominated by a range of large and medium shrub species on the stream levees in combination with large tussock grasses and sedges in the ground layer.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	60 cm	10 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus camphora</i> ssp. <i>humeana</i>	Mountain Swamp-gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	25%	T
Medium Shrub	4	20%	MS
Small Shrub	1	1%	SS
Prostrate Shrub	1	1%	PS
Large Herb	3	5%	LH
Medium Herb	6	10%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	3	15%	LTG
Large Non-tufted Graminoid	2	10%	LNG
Medium to Small Tufted Graminoid	6	15%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	2	5%	GF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	10%	BL

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Leptospermum lanigerum</i>	Woolly Tea-tree
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
PS	<i>Xanthosia dissecta</i> s.l.	Cut-leaf Xanthosia
LH	<i>Senecio minimus</i>	Shrubby Fireweed
LH	<i>Lycopus australis</i>	Australian Gipsywort
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
LTG	<i>Poa labillardierei</i>	Common Tussock Grass
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Juncus procerus</i>	Tall Rush
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LNG	<i>Baumea rubiginosa</i> s.l.	Soft Twig-rush
LNG	<i>Phragmites australis</i>	Common Reed
MTG	<i>Carex gaudichaudiana</i>	Fen Sedge
MTG	<i>Dianella revoluta</i> s.s.	Black-anther Flax-lily
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
SC	<i>Billardiera scandens</i>	Common Apple-berry



# EVC 83: Swampy Riparian Woodland Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

20 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

<b>LF Code</b>	<b>Typical Weed Species</b>	<b>Common Name</b>	<b>Invasive</b>	<b>Impact</b>
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 127: Valley Heathy Forest

#### Description:

A low, open forest to 15 m tall with a sedgy/grassy understorey with a component of small ericoid shrubs and grass-trees. Soil and moisture factors are critical in delimiting the vegetation.

#### Large trees:

Species	DBH(cm)	# / ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus macrorhyncha</i>	Red Stringybark
	<i>Eucalyptus dives</i>	Broad-leaved Peppermint
	<i>Eucalyptus obliqua</i>	Messmate Stringybark

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	10%	T
Medium Shrub	7	15%	MS
Small Shrub	5	10%	SS
Prostrate Shrub	2	1%	PS
Medium Herb	6	10%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	2	20%	LNG
Medium to Small Tufted Graminoid	7	15%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	1	1%	GF
Scrambler or Climber	3	5%	SC
Bryophytes/Lichens	na	10%	BL

# EVC 127: Valley Heathy Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Daviesia leptophylla</i>	Narrow-leaf Bitter-pea
MS	<i>Cassinia arcuata</i>	Drooping Cassinia
SS	<i>Platylobium obtusangulum</i>	Common Flat-pea
SS	<i>Dillwynia cinerascens s.l.</i>	Grey Parrot-pea
SS	<i>Hovea heterophylla</i>	Common Hovea
SS	<i>Pimelea humilis</i>	Common Rice-flower
PS	<i>Acrotriche serrulata</i>	Honey-pots
PS	<i>Bossiaea prostrata</i>	Creeping Bossiaea
MH	<i>Leptorhynchus tenuifolius</i>	Wiry Buttons
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Helichrysum scorpioides</i>	Button Everlasting
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Drosera whittakeri ssp. aberrans</i>	Scented Sundew
SH	<i>Oxalis corniculata s.l.</i>	Yellow Wood-sorrel
LTG	<i>Xanthorrhoea minor ssp. lutea</i>	Small Grass-tree
LTG	<i>Deyeuxia quadriseta</i>	Reed Bent-grass
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Joycea pallida</i>	Silvertop Wallaby-grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Poa morrisii</i>	Soft Tussock-grass
MTG	<i>Dianella revoluta s.l.</i>	Black-anther Flax-lily
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
GF	<i>Lindsaea linearis</i>	Screw Fern
SC	<i>Billardiera scandens</i>	Common Apple-berry
SC	<i>Hardenbergia violacea</i>	Purple Coral-pea

## Recruitment:

Episodic/Fire. Desirable period between disturbances is 30 years.

## Organic Litter:

40 % cover

## Logs:

20 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
T	<i>Pinus radiata</i>	Radiata Pine	low	high
MS	<i>Rubus fruticosus spp. agg.</i>	Blackberry	high	high
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 128: Grassy Forest

#### Description:

Low growing forest to 20 m tall with an understorey of small and medium shrubs and a rich diversity of herbs. Large shrubs and understorey trees may also be conspicuous. Often grows in areas transitional between drier box stringybark forests and taller, herb-rich forests typical of more favourable environments.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus goniocalyx</i> s.l.	Bundy

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	5	30%	MS
Small Shrub	1	1%	SS
Prostrate Shrub	1	1%	PS
Large Herb	2	1%	LH
Medium Herb	5	10%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	2	10%	LNG
Medium to Small Tufted Graminoid	5	15%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	1	5%	GF
Scrambler or Climber	3	5%	SC
Bryophytes/Lichens	na	10%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
MS	<i>Ozothamnus ferrugineus</i>	Tree Everlasting
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Cassinia aculeata</i>	Common Cassinia
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
SS	<i>Pimelea humilis</i>	Common Rice-flower
PS	<i>Acrotriche serrulata</i>	Honey-pots
PS	<i>Acrotriche prostrata</i>	Trailing Ground-berry
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Hypericum gramineum</i>	Small St John's Wort
MH	<i>Viola hederacea sensu Willis (1972)</i>	Ivy-leaf Violet
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Opercularia varia</i>	Variable Stinkweed
LTG	<i>Deyeuxia quadriseta</i>	Reed Bent-grass
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Adiantum aethiopicum</i>	Common Maidenhair
SC	<i>Billardiera scandens</i>	Common Apple-berry
SC	<i>Glycine clandestina</i>	Twining Glycine

# EVC 128: Grassy Forest Highlands – Southern Fall bioregion

**Recruitment:**

Episodic/Fire. Desirable period between disturbances is 30 years.

**Organic Litter:**

40 % cover

**Logs:**

20 m/0.1 ha.

**Weediness:**

<b>LF Code</b>	<b>Typical Weed Species</b>	<b>Common Name</b>	<b>Invasive</b>	<b>Impact</b>
MS	<i>Rubus fruticosus</i> spp. agg.	Blackberry	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 132: Plains Grassland

### Description:

Treeless vegetation dominated by largely graminoid and herb life forms. Shrubs and trees may be also occasionally present.

### Life Forms:

Life form	#Spp	%Cover	LF code
Small Shrub	1	1%	SS
Large Herb	3	5%	LH
Medium Herb	10	15%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	1	5%	LTG
Medium to Small Tufted Graminoid	13	40%	MTG
Medium to Tiny Non-tufted Graminoid	4	10%	MNG
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

### LF Code

### Species typical of at least part of EVC range

### Common Name

SS	<i>Pimelea humilis</i>	Common Rice-flower
LH	<i>Eryngium ovinum</i>	Blue Devil
LH	<i>Senecio quadridentatus</i>	Cottony Fireweed
MH	<i>Calocephalus citreus</i>	Lemon Beauty-heads
MH	<i>Acaena echinata</i>	Sheep's Burr
MH	<i>Leptorhynchus squamatus</i>	Scaly Buttons
MH	<i>Geranium retrorsum</i> s.l.	Grassland Crane's-bill
SH	<i>Solenogyne dominii</i>	Smooth Solenogyne
SH	<i>Lobelia pratioides</i>	Poison Lobelia
LTG	<i>Austrostipa bigeniculata</i>	Kneed Spear-grass
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Austrodanthonia caespitosa</i>	Common Wallaby-grass
MTG	<i>Elymus scaber</i> var. <i>scaber</i>	Common Wheat-grass
MTG	<i>Schoenus apogon</i>	Common Bog-sedge
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass

### Recruitment:

Episodic/Fire or Grazing. Desirable period between disturbances is 5 years.

### Organic Litter:

10% cover

# EVC 132: Plains Grassland Highlands - Southern Fall bioregion

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Leontodon taraxacoides</i> ssp. <i>taraxacoides</i>	Hairy Hawkbit	high	low
MH	<i>Trifolium subterraneum</i>	Subterranean Clover	high	low
MH	<i>Plantago coronopus</i>	Buck's-horn Plantain	high	low
MH	<i>Trifolium striatum</i>	Knotted Clover	high	low
MH	<i>Trifolium dubium</i>	Suckling Clover	high	low
LTG	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Romulea rosea</i>	Onion Grass	high	low
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MTG	<i>Briza minor</i>	Lesser Quaking-grass	high	low
MTG	<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Lolium rigidum</i>	Wimmera Rye-grass	high	low
MTG	<i>Lolium perenne</i>	Perennial Rye-grass	high	low
MTG	<i>Nassella neesiana</i>	Chilean Needle-grass	high	high
MNG	<i>Cynosurus echinatus</i>	Rough Dog's-tail	high	low
MNG	<i>Juncus capitatus</i>	Capitate Rush	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 151: Plains Grassy Forest

#### Description:

Open forest to 20 m tall often above a heathy shrub layer and a diverse grassy, sedgy and herbaceous ground layer. Occurs on lowland plains and old river terraces made up of gravelly sandy clays.

#### Large trees:

Species	DBH(cm)	# / ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus muelleriana</i>	Yellow Stringybark
	<i>Eucalyptus bridgesiana</i> s.l.	But But
	<i>Eucalyptus polyanthemus</i>	Red Box
	<i>Eucalyptus macrorhyncha</i>	Red Stringybark

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	3	15%	T
Medium Shrub	6	20%	MS
Small Shrub	3	5%	SS
Prostrate Shrub	2	5%	PS
Large Herb	3	5%	LH
Medium Herb	6	10%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	4	15%	MTG
Medium to Tiny Non-tufted Graminoid	2	1%	MNG
Ground Fern	2	10%	GF
Bryophytes/Lichens	na	10%	BL

# EVC 151: Plains Grassy Forest Highlands - Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Allocasuarina littoralis</i>	Black Sheoak
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Acacia implexa</i>	Lightwood
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Banksia marginata</i>	Silver Banksia
MS	<i>Kunzea ericoides</i>	Burgan
MS	<i>Melaleuca parvistaminea</i>	Rough-barked Honey-myrtle
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Hibbertia riparia</i>	Erect Guinea-flower
SS	<i>Platylobium obtusangulum</i>	Common Flat-pea
SS	<i>Phyllanthus hirtellus</i>	Thyme Spurge
PS	<i>Acrotriche serrulata</i>	Honey-pots
PS	<i>Bossiaea prostrata</i>	Creeping Bossiaea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
LH	<i>Tricoryne elatior</i>	Yellow Rush-lily
LH	<i>Wahlenbergia gracilis</i> s.l.	Sprawling Bluebell
MH	<i>Poranthera microphylla</i>	Small Poranthera
MH	<i>Hypericum gramineum</i>	Small St John's Wort
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Oxalis corniculata</i> s.l.	Yellow Wood-sorrel
SH	<i>Opercularia varia</i>	Variable Stinkweed
LTG	<i>Xanthorrhoea minor</i> ssp. <i>lutea</i>	Small Grass-tree
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Poa australis</i> spp. agg.	Tussock Grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
MNG	<i>Entolasia marginata</i>	Bordered Panic
GF	<i>Pteridium esculentum</i>	Austral Bracken

#### Recruitment:

Continuous

#### Organic Litter:

20 % cover

#### Logs:

20 m/0.1 ha.

#### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Centaureum tenuiflorum</i>	Slender Centaury	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 164: Creekline Herb-rich Woodland

#### Description:

Woodland or open forest to 15 m tall occurring on creek terraces and along shallow drainage lines with ephemeral flows. Soils are mostly alluvial deposits of seasonally wet sands and silts. Characterised by a sparse shrub layer above a grassy/sedgy understorey, often rich in herbs within the inter-tussock spaces.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	10 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus ovata</i>	Swamp Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	3	10%	MS
Small Shrub	2	5%	SS
Prostrate Shrub	2	5%	PS
Large Herb	2	1%	LH
Medium Herb	8	15%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	2	10%	LNG
Medium to Small Tufted Graminoid	8	20%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	2	10%	GF
Scrambler or Climber	5	5%	SC
Bryophytes/Lichens	na	20%	BL



# EVC 164: Creekline Herb-rich Woodland Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Acacia stricta</i>	Hop Wattle
MS	<i>Ozothamnus ferrugineus</i>	Tree Everlasting
MS	<i>Olearia lirata</i>	Snow Daisy-bush
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Hovea heterophylla</i>	Common Hovea
PS	<i>Astroloma humifusum</i>	Cranberry Heath
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Pterostylis longifolia</i> s.l.	Tall Greenhood
LH	<i>Senecio quadridentatus</i>	Cotton Fireweed
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Lagenophora stipitata</i>	Common Bottle-daisy
MH	<i>Lagenophora gracilis</i>	Slender Bottle-daisy
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Drosera whittakeri</i> ssp. <i>aberrans</i>	Scented Sundew
SH	<i>Chiloglottis gunnii</i> s.l.	Common Bird-orchid
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Deyeuxia quadriseta</i>	Reed Bent-grass
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Dianella revoluta</i> s.s.	Black-anther Flax-lily
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MTG	<i>Carex inversa</i>	Knob Sedge
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Adiantum aethiopicum</i>	Common Maidehair
SC	<i>Hardenbergia violacea</i>	Purple Coral-pea
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

## Recruitment:

Continuous

## Organic Litter:

20 % cover

## Logs:

10 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Prunus cerasifera</i>	Cherry Plum	high	high
MS	<i>Rubus</i> sp. aff. <i>armeniacus</i>	Blackberry	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Leontodon taraxacoides</i> ssp. <i>taraxacoides</i>	Hairy Hawkbit	high	low
MH	<i>Hypochoeris glabra</i>	Smooth Cat's-ear	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MTG	<i>Briza minor</i>	Lesser Quaking-grass	high	low
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MNG	<i>Aira elegantissima</i>	Delicate Hair-grass	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 169: Dry Valley Forest

#### Description:

Open eucalypt forest to 20 m tall occurring along minor gullies, ephemeral streams and river flats. The overstorey may contain a range of eucalypts typical of drier environments over an understorey of scattered shrubs and a notably mossy herb-rich groundcover.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus macrorhyncha</i>	Red Stringybark
	<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	15%	T
Medium Shrub	9	30%	MS
Small Shrub	3	10%	SS
Prostrate Shrub	1	1%	PS
Large Herb	4	5%	LH
Medium Herb	11	15%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	3	5%	LTG
Medium to Small Tufted Graminoid	4	15%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	3	10%	GF
Tree Fern	1	5%	TRF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	10%	BL

# EVC 169: Dry Valley Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Olearia argophylla</i>	Musk Daisy-bush
T	<i>Acacia dealbata</i>	Silver Wattle
MS	<i>Pimelea axiflora</i>	Bootlace Bush
MS	<i>Olearia phlogopappa</i>	Dusty Daisy-bush
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Goodia lotifolia</i>	Golden Tip
SS	<i>Tetradlea pilosa</i>	Hairy Pink-bells
SS	<i>Hibbertia obtusifolia</i>	Grey Guinea-flower
SS	<i>Olearia megalophylla</i>	Large-leaf Daisy-bush
LH	<i>Stypantra glauca</i>	Nodding Blue-lily
LH	<i>Chrysocephalum semipapposum</i>	Clustered Everlasting
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
SH	<i>Leptinella filicula</i>	Mountain Cotula
SH	<i>Chiloglottis gunnii s.l.</i>	Common Bird-orchid
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LTG	<i>Deyeuxia frigida</i>	Forest Bent-grass
MTG	<i>Poa australis spp. agg.</i>	Tussock Grass
MTG	<i>Libertia pulchella</i>	Pretty Grass-flag
MTG	<i>Dianella revoluta s.l.</i>	Black-anther Flax-lily
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
GF	<i>Blechnum watsii</i>	Hard Water-fern
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
SC	<i>Hardenbergia violacea</i>	Purple Coral-pea

## Recruitment:

Continuous

## Organic Litter:

40 % cover

## Logs:

20 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Cerastium glomeratum s.l.</i>	Common Mouse-ear Chickweed	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 175: Grassy Woodland

#### Description:

A variable open eucalypt woodland to 15 m tall over a diverse ground layer of grasses and herbs. The shrub component is usually sparse. It occurs on sites with moderate fertility on gentle slopes or undulating hills on a range of geologies.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus bridgesiana</i> s.l.	But But
	<i>Eucalyptus rubida</i>	Candlebark
	<i>Eucalyptus pauciflora</i>	Snow Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	10%	T
Medium Shrub	4	15%	MS
Small Shrub	2	5%	SS
Large Herb	2	5%	LH
Medium Herb	7	20%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	7	35%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	1	5%	GF
Scrambler or Climber	1	1%	SC
Bryophytes/Lichens	na	10%	BL

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

T	<i>Acacia dealbata</i>	Silver Wattle
MS	<i>Daviesia ulicifolia</i>	Gorse Bitter-pea
SS	<i>Hovea heterophylla</i>	Common Hovea
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Plantago hispida</i>	Hairy Plantain
MH	<i>Daucus glochidiatus</i>	Australian Carrot
MH	<i>Leptorhynchos squamatus</i>	Scaly Buttons
SH	r <i>Scleranthus diander</i>	Tufted Knawel
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Carex breviculmis</i>	Common Grass-sedge
MTG	<i>Schoenus apogon</i>	Common Bog-sedge
SC	<i>Hardenbergia violacea</i>	Purple Coral-pea

#### Recruitment:

Continuous

#### Organic Litter:

20 % cover

#### Logs:

15 m/0.1 ha.

#### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Centaurium erythraea</i>	Common Centaury	high	low

# EVC 175: Grassy Woodland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 177: Valley Slopes Dry Forest

#### Description:

Open eucalypt forest to 20 m tall. Occurs on steep, eroding slopes in dry country above the Mitchell, Dargo and Tambo Rivers. Soils are skeletal though fertile and well-drained, with occasional rock outcropping which constantly erodes and falls into the river where it undercuts steep slopes. The unconsolidated soils are partially due to low biomass in the vegetation, which does little to bind the soil. This EVC carries a mixture of wet and dry species as river fogs and river margins provide increased moisture and hence the understorey consists of a mix of species common to both drier and wetter sites that do not usually occur together.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus polyanthemos</i>	Red Box
	<i>Eucalyptus melliodora</i>	Yellow Box
	<i>Eucalyptus elata</i>	River Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	15%	T
Medium Shrub	6	20%	MS
Small Shrub	1	5%	SS
Large Herb	5	10%	LH
Medium Herb	8	15%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	6	15%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	3	5%	GF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

# EVC 177: Valley Slopes Dry Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
T	<i>Acacia implexa</i>	Lightwood
T	<i>Acacia mearnsii</i>	Black Wattle
MS	<i>Cassinia longifolia</i>	Shiny Cassinia
MS	<i>Lomatia myricoides</i>	River Lomatia
MS	<i>Indigofera australis</i>	Austral Indigo
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
LH	<i>Senecio pinnatifolius</i>	Variable Groundsel
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
LH	<i>Senecio hispidulus</i>	Rough Fireweed
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Einadia hastata</i>	Saloop
MH	<i>Veronica calycina</i>	Hairy Speedwell
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Oxalis corniculata s.l.</i>	Yellow Wood-sorrel
SH	<i>Desmodium gunnii</i>	Southern Tick-trefoil
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Notodanthonia longifolia</i>	Long-leaf Wallaby-grass
MTG	<i>Poa ensiformis</i>	Sword Tussock-grass
MTG	<i>Poa sieberiana var. sieberiana</i>	Grey Tussock-grass
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
GF	<i>Calochlaena dubia</i>	Common Ground-fern
GF	<i>Cheilanthes austrotenuifolia</i>	Green Rock-fern
GF	<i>Asplenium flabellifolium</i>	Necklace Fern
EP	<i>Amyema pendula</i>	Drooping Mistletoe
EP	<i>Amyema miquelii</i>	Box Mistletoe
SC	<i>Pandorea pandorana</i>	Wonga Vine
SC	<i>Glycine clandestina</i>	Twining Glycine

## Recruitment:

Continuous

## Organic Litter:

40 % cover

## Logs:

20 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rubus fruticosus spp. agg.</i>	Blackberry	high	high
LH	<i>Verbascum virgatum</i>	Twiggy Mullein	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
MH	<i>Anagallis arvensis</i>	Pimpernel	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 191: Riparian Scrub

#### Description:

A dense shrubland to 6 m tall growing on waterlogged substrates often with a peaty surface horizon. Emergent eucalypts may be occasionally present. The understorey is often species-poor and consists typically of sedges tolerant of seasonal waterlogging. Occurs along creeks and minor stream tributaries of the lowland plains.

#### Canopy Cover:

%cover	Character Species	Common Name
60%	<i>Melaleuca squarrosa</i>	Scented Paperbark
	<i>Leptospermum continentale</i>	Prickly Tea-tree

#### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	1	5%	MS
Small Shrub	1	1%	SS
Medium Herb	1	1%	MH
Small or Prostrate Herb	1	1%	SH
Large Tufted Graminoid	1	10%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	1	1%	MTG
Medium to Tiny Non-tufted Graminoid	2	20%	MNG
Ground Fern	1	5%	GF
Scrambler or Climber	1	10%	SC
Bryophytes/Lichens	na	20%	BL
<b>Total understorey projective foliage cover</b>		<b>75%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Ozothamnus ferrugineus</i>	Tree Everlasting
SS	<i>Amperea xiphoclada</i> var. <i>xiphoclada</i>	Broom Spurge
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Selaginella uliginosa</i>	Swamp Selaginella
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LNG	<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
MNG	<i>Baumea tetragona</i>	Square Twig-rush
MNG	<i>Schoenus brevifolius</i>	Zig-zag Bog-sedge
MNG	<i>Empodisma minus</i>	Spreading Rope-rush
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Gleichenia microphylla</i>	Scrambling Coral-fern
SC	<i>Billardiera scandens</i>	Common Apple-berry

#### Recruitment:

Continuous

#### Organic Litter:

40 % cover

#### Weediness:

There are no consistent weeds in this EVC.

# EVC 191: Riparian Scrub Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 192: Montane Rocky Shrubland

#### Description:

Treeless or sparsely treed shrubland of rocky alpine peaks greater than 1000 m above sea level which are subject to low cloud cover and snowfall during winter. When present, trees are often stunted and low-growing and may form part of the dominant shrub layer.

#### Life Forms:

Life form	#Spp	%Cover	LF code
Medium Shrub	8	40%	MS
Small Shrub	2	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	5	5%	LH
Medium Herb	7	5%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	4	5%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	3	5%	GF
Scrambler or Climber	1	1%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Tasmannia lanceolata</i>	Mountain Pepper
MS	<i>Coprosma hirtella</i>	Rough Coprosma
MS	<i>Leucopogon gelidus</i>	Drooping Beard-heath
MS	<i>Olearia phlogopappa</i>	Dusty Daisy-bush
SS	<i>Olearia erubescens</i>	Moth Daisy-bush
SS	<i>Leucopogon hookeri</i>	Mountain Beard-heath
SS	<i>Rubus parvifolius</i>	Small-leaf Bramble
PS	<i>Platylobium formosum</i>	Handsome Flat-pea
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
LH	<i>Arthropodium milleflorum</i> s.l.	Pale Vanilla-lily
LH	<i>Derwentia derwentiana</i>	Derwent Speedwell
LH	<i>Senecio gunnii</i>	Mountain Fireweed
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Craspedia glauca</i> spp. agg.	Common Billy-buttons
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
SH	<i>Leptinella filicula</i>	Mountain Cotula
SH	<i>Chiloglottis gunnii</i> s.l.	Common Bird-orchid
LTG	<i>Deyeuxia frigida</i>	Forest Bent-grass
LTG	<i>Carex appressa</i>	Tall Sedge
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Luzula meridionalis</i>	Common Woodrush
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Luzula meridionalis</i> var. <i>flaccida</i>	Common Woodrush
MNG	<i>Poa tenera</i>	Slender Tussock-grass
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Blechnum penna-marina</i> ssp. <i>alpina</i>	Alpine Water-fern
GF	<i>Asplenium flabellifolium</i>	Necklace Fern
SC	<i>Clematis aristata</i>	Mountain Clematis



# EVC 192: Montane Rocky Shrubland Highlands – Southern Fall bioregion

## Recruitment:

Episodic/Fire. Desirable period between disturbances is 30 years.

## Organic Litter:

40 % cover

## Logs:

10 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low
MTG	<i>Briza minor</i>	Lesser Quaking-grass	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 201: Shrubby Wet Forest

#### Description:

Tall eucalypt forest to 30 m tall with scattered understorey trees over a tall broad-leaved shrubby understorey and a moist, shaded, fern-rich ground layer that is usually dominated by tree-ferns. Herbs may also be abundant where light penetrates the ground layer.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus obliqua</i>	Messmate Stringybark
	<i>Eucalyptus croajingolensis</i>	Gippsland Peppermint

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	30%	T
Medium Shrub	7	25%	MS
Small Shrub	2	1%	SS
Large Herb	2	1%	LH
Medium Herb	6	10%	MH
Medium to Small Tufted Graminoid	2	5%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	3	10%	GF
Tree Fern	2	5%	TRF
Scrambler or Climber	1	1%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Olearia argophylla</i>	Musk Daisy-bush
T	<i>Lomatia fraseri</i>	Tree Lomatia
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Polyscias sambucifolia</i>	Elderberry Panax
MS	<i>Cassinia longifolia</i>	Shiny Cassinia
SS	<i>Tetralochea labillardierei</i>	Glandular Pink-bells
SS	<i>Olearia erubescens</i>	Moth Daisy-bush
LH	<i>Senecio minimus</i>	Shrubby Fireweed
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
MH	<i>Viola hederacea</i> sensu Entwisle (1996)	Ivy-leaf Violet
MH	<i>Hydrocotyle hirta</i>	Hairy Pennywort
MH	<i>Drymophila cyanocarpa</i>	Turquoise Berry
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
SH	<i>Leptinella filicula</i>	Mountain Cotula
LNG	<i>Tetrarrhena juncea</i>	Forest Wire-grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MNG	<i>Poa tenera</i>	Slender Tussock-grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Histiopteris incisa</i>	Bat's Wing Fern
GF	<i>Blechnum nudum</i>	Fishbone Water-fern
TRF	<i>Dicksonia antarctica</i>	Soft Tree-fern
TRF	<i>Cyathea australis</i>	Rough Tree-fern
SC	<i>Clematis aristata</i>	Mountain Clematis

# EVC 201: Shrubby Wet Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

50 % cover

**Logs:**

30 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Rorippa palustris</i>	Marsh Yellow-cress	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 206: Sub-alpine Grassland

#### Description:

Occurs primarily in areas at altitudes of around 1200 m above sea level. Structurally and floristically this EVC is dominated by grasses. Any shrubs present tend to be small and cryptic. The fertile and highly organic soils which are generally derived from granodiorite provide a suitable substrate for a lush cover of grasses and herbs, many specific to montane/sub-alpine environments. Snow persists for several months over winter. Species richness is low, indicative of the harsh environment.

#### Life Forms:

Life form	#Spp	%Cover	LF code
Medium Shrub	1	5%	MS
Small Shrub	3	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	3	5%	LH
Medium Herb	11	20%	MH
Small or Prostrate Herb	3	10%	SH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	5	20%	MTG
Medium to Tiny Non-tufted Graminoid	2	10%	MNG
Bryophytes/Lichens	na	20%	BL
Soil Crust	na	10%	S/C

#### LF Code

#### Species typical of at least part of EVC range

#### Common Name

MS	<i>Baeckea gunniana</i>	Alpine Baeckea
SS	<i>Grevillea australis</i>	Alpine Grevillea
SS	<i>Leucopogon hookeri</i>	Mountain Beard-heath
SS	<i>Hovea montana</i>	Alpine Rusty-pods
PS	<i>Pimelea alpina</i>	Alpine Rice-flower
MH	<i>Asperula gunnii</i>	Mountain Woodruff
MH	<i>Celmisia asteliifolia</i> spp. agg.	Silver Daisy
MH	<i>Leptorhynchos squamatus</i>	Scaly Buttons
MH	<i>Craspedia glauca</i> spp. agg.	Common Billy-buttons
SH	<i>Scleranthus biflorus</i> s.l.	Twin-flower Knawel
SH	<i>Gonocarpus micranthus</i> ssp. <i>micranthus</i>	Creeping Raspwort
SH	<i>Cotula alpina</i>	Alpine Cotula
MTG	<i>Carex breviculmis</i>	Common Grass-sedge
MTG	<i>Poa fawcettiae</i>	Horny Snow-grass
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Poa costiniana</i>	Bog Snow-grass
MNG	<i>Empodisma minus</i>	Spreading Rope-rush

#### Recruitment:

Continuous

#### Organic Litter:

10% Cover

#### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Acetosella vulgaris</i>	Sheep Sorrel	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
SH	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	high	high

# EVC 206: Sub-alpine Grassland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 210: Sub-alpine Wet Heathland

#### Description:

Virtually treeless and characterised by a dense layer of low heathy shrubs to 2 m tall, with a number of sedges and rushes in the understorey. Occurs at elevations above 1000 m, in soaks or along small streams. Rainfall is generally greater than 1000 mm per annum, and during winter, this EVC can tolerate long periods of snow cover and low temperature. Deep, peaty, sodden soils are usually covered by a layer of sphagnum moss.

#### Life Forms:

Life form	#Spp	%Cover	LF code
Medium Shrub	4	15%	MS
Small Shrub	3	10%	SS
Prostrate Shrub	1	1%	PS
Large Herb	1	1%	LH
Medium Herb	8	15%	MH
Small or Prostrate Herb	4	10%	SH
Large Tufted Graminoid	1	1%	LTG
Medium to Small Tufted Graminoid	4	10%	MTG
Medium to Tiny Non-tufted Graminoid	2	15%	MNG
Ground Fern	1	1%	GF
Bryophytes/Lichens	na	40%	BL

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Epacris paludosa</i>	Swamp Heath
MS	<i>Baeckea gunniana</i>	Alpine Baeckea
MS	<i>Callistemon pityoides</i>	Alpine Bottlebrush
MS	<i>Baeckea utilis</i> s.l.	Mountain Baeckea
SS	<i>Richea continentis</i>	Candle Heath
SS	<i>Olearia algida</i>	Mountain Daisy-bush
LH	<i>Epilobium gunnianum</i>	Gunn's Willow-herb
MH	<i>Astelia alpina</i> var. <i>novae-hollandiae</i>	Silver Astelia
MH	<i>Gentianella diemensis</i> s.l.	Mountain Gentian
MH	<i>Asperula gunnii</i>	Mountain Woodruff
MH	<i>Celmisia asteliifolia</i> spp. agg.	Silver Daisy
SH	<i>Nertera granadensis</i>	Matted Nertera
SH	<i>Oreobolus distichus</i>	Fan Tuft-rush
SH	<i>Gonocarpus micranthus</i> ssp. <i>micranthus</i>	Creeping Raspwort
LTG	<i>Carex appressa</i>	Tall Sedge
MTG	<i>Stylidium graminifolium</i> s.l.	Grass Trigger-plant
MTG	<i>Carpha nivicola</i>	Broad-leaf Flower-rush
MTG	<i>Isolepis aucklandica</i>	New Zealand Club-sedge
MTG	<i>Poa hiemata</i>	Soft Snow-grass
MNG	<i>Empodisma minus</i>	Spreading Rope-rush
GF	<i>Lycopodium fastigiatum</i>	Mountain Clubmoss
GF	<i>Blechnum penna-marina</i> ssp. <i>alpina</i>	Alpine Water-fern

#### Recruitment:

Episodic/Fire. Desirable period between disturbances is 30 years.

#### Organic Litter:

10% cover

#### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

# EVC 210: Sub-alpine Wet Heathland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 316: Shrubby Damp Forest

#### Description:

Grows in gullies and on protected slopes on relatively skeletal but fertile sedimentary soils. Occurs at elevations of around 500 m above sea level and receives a low to moderate annual rainfall of approximately 750 mm. The overstorey includes a variety of Eucalypt species to 25 m tall. Silver Wattle is a common understorey tree. The dense mid stratum is comprised of medium to large shrubs characteristic of both drier and damper environments. The ground layer has a sparse cover of grasses and herbs, and commonly includes Austral Bracken.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	90 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus obliqua</i>	Messmate Stringybark

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	20%	T
Medium Shrub	8	20%	MS
Small Shrub	2	10%	SS
Prostrate Shrub	1	1%	PS
Large Herb	4	5%	LH
Medium Herb	8	15%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	3	10%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	2	15%	GF
Tree Fern	1	1%	TRF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	20%	BL

# EVC 316: Shrubby Damp Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Pomaderris aspera</i>	Hazel Pomaderris
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Exocarpos cupressiformis</i>	Cherry Ballart
MS	<i>Cassinia longifolia</i>	Shiny Cassinia
MS	<i>Pimelea axiflora</i>	Bootlace Bush
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Olearia lirata</i>	Snowy Daisy-bush
SS	<i>Olearia megalophylla</i>	Large-leaf Daisy-bush
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
MH	<i>Viola hederacea sensu Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Lagenophora stipitata</i>	Common Bottle-daisy
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MTG	<i>Poa australis</i> spp. agg.	Tussock Grass
MTG	<i>Dianella revoluta</i> s.l.	Black-anther Flax-lily
MTG	<i>Austrodanthonia pilosa</i>	Velvet Wallaby-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Blechnum wattsii</i>	Hard Water-fern
SC	<i>Clematis aristata</i>	Mountain Clematis

## Recruitment:

Continuous

## Organic Litter:

50 % cover

## Logs:

30 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 319: Montane Herb-rich Woodland

#### Description:

Occurs on southern and eastern-facing slopes or in protected gullies at elevations of around 1000 m above sea level, and receives a high rainfall of almost 1100 mm per annum. It is subject to cold air drainage, which influences the species mix. A mixture of eucalypts to 25 m tall forms the overstorey, with Silver Wattle abundant below. The shrub layer is neither diverse nor dense. The ground layer carries a diversity of herbs, graminoids and grasses. Climbers are commonly present.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
40%	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus delegatensis</i> ssp. <i>delegatensis</i>	Alpine Ash

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	6	15%	MS
Small Shrub	2	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	5	10%	LH
Medium Herb	12	20%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	1	5%	LTG
Medium to Small Tufted Graminoid	8	20%	MTG
Medium to Tiny Non-tufted Graminoid	1	1%	MNG
Ground Fern	3	10%	GF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	20%	BL



# EVC 319: Montane Herb-rich Woodland Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia dealbata</i>	Silver Wattle
T	<i>Notelaea ligustrina</i>	Privet Mock-olive
MS	<i>Coprosma hirtella</i>	Rough Coprosma
MS	<i>Pultenaea juniperina</i> s.l.	Prickly Bush-pea
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Exocarpos strictus</i>	Pale-fruit Ballart
SS	<i>Olearia erubescens</i>	Moth Daisy-bush
SS	<i>Leucopogon hookeri</i>	Mountain Beard-heath
SS	<i>Tetralochea ciliata</i>	Pink-bells
PS	<i>Platylobium formosum</i>	Handsome Flat-pea
LH	<i>Wahlenbergia stricta</i>	Tall Bluebell
LH	<i>Epilobium billardierianum</i>	Variable Willow-herb
LH	<i>Picris angustifolia</i>	Native Picris
LH	<i>Derwentia derwentiana</i>	Derwent Speedwell
MH	<i>Ranunculus plebeius</i> s.l.	Forest/Hairy Buttercup
MH	<i>Stellaria pungens</i>	Prickly Starwort
MH	<i>Asperula scoparia</i>	Prickly Woodruff
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
SH	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort
SH	<i>Lobelia pedunculata</i> s.l.	Matted Pratia
SH	<i>Leptinella filicula</i>	Mountain Cotula
SH	<i>Oxalis exilis</i>	Shady Wood-sorrel
LTG	<i>Poa helmsii</i>	Tall Mountain Tussock-grass
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
MTG	<i>Poa sieberiana</i>	Grey Tussock-grass
MTG	<i>Carex breviculmis</i>	Common Grass-sedge
MTG	<i>Poa ensiformis</i>	Sword Tussock-grass
MTG	<i>Dianella tasmanica</i>	Tasman Flax-lily
MNG	<i>Echinopogon ovatus</i>	Common Hedgehog-grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Asplenium flabellifolium</i>	Necklace Fern
SC	<i>Glycine clandestina</i>	Twining Glycine
SC	<i>Clematis aristata</i>	Mountain Clematis

**Recruitment:**  
Continuous

**Organic Litter:**  
20 % cover

**Logs:**  
15 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
SH	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 641: Riparian Woodland

#### Description:

Occurs beside permanent streams, typically on narrow alluvial deposits. Woodland to 20 m tall generally dominated by *Eucalyptus camaldulensis* over a tussock grass-dominated understorey. Tall shrubs may be present and amphibious herbs may occur in occasional ponds and beside creeks. While flooding may be common, sites are rarely inundated for lengthy periods.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	80 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus camaldulensis</i>	River Red-gum
	<i>Eucalyptus viminalis</i> ssp. <i>viminalis</i>	Manna Gum
	<i>Eucalyptus tereticornis</i>	Gippsland Red Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	4	10%	MS
Small Shrub	1	5%	SS
Large Herb	4	15%	LH
Medium Herb	5	10%	MH
Small or Prostrate Herb	1	5%	SH
Large Tufted Graminoid	3	15%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	4	20%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Scrambler or Climber	1	5%	SC
Bryophytes/Lichens	na	10%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Melaleuca ericifolia</i>	Swamp Paperbark
MS	<i>Bursaria spinosa</i> ssp. <i>spinosa</i>	Sweet Bursaria
MS	<i>Hymenanthera dentata</i>	Tree Violet
MS	<i>Callistemon sieberi</i>	River Bottlebrush
MS	<i>Gynatrix pulchella</i>	Hemp Bush
SS	<i>Rubus parvifolius</i>	Small-leaf Bramble
LH	<i>Wahlenbergia gracilis</i> s.s.	Sprawling Bluebell
LH	<i>Senecio minimus</i>	Shrubby Groundsel
LH	<i>Myriophyllum crispatum</i>	Upright Water-milfoil
MH	<i>Rumex brownii</i>	Slender Dock
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
MH	<i>Mentha australis</i>	River Mint
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
SH	<i>Dichondra repens</i>	Kidneyweed
LTG	<i>Poa labillardierei</i>	Common Tussock-grass
LTG	<i>Carex appressa</i>	Tall Sedge
LNG	<i>Phragmites australis</i>	Common Reed
MTG	<i>Lachnagrostis filiformis</i> var. <i>filiformis</i>	Common Blown-grass
MTG	<i>Triglochin procerum</i> s.l.	Water-ribbons
MNG	<i>Eleocharis acuta</i>	Common Spike-sedge
SC	<i>Calystegia sepium</i>	Large Bindweed

# EVC 641: Riparian Woodland Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

30% cover

**Logs:**

20m / 0.1 ha

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rosa rubiginosa</i>	Sweet Briar	high	high
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
LH	<i>Helminthotheca echinoides</i>	Ox-tongue	high	low
LH	<i>Rumex crispus</i>	Curled Dock	high	low
LH	<i>Aster subulatus</i>	Aster-weed	high	low
LH	<i>Rorippa palustris</i>	Marsh Yellow-cress	high	high
MH	<i>Leontodon taraxacoides</i> ssp. <i>taraxacoides</i>	Hairy Hawkbit	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
LTG	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MNG	<i>Paspalum distichum</i>	Water Couch	high	high
SC	<i>Galium aparine</i>	Cleavers	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 653: Aquatic Herbland

### Description:

Herbland of permanent to semi-permanent wetlands, dominated by sedges (especially on shallower verges) and/or aquatic herbs. Occurs on fertile paludal soils, typically heavy clays beneath organic accumulations.

### Life Forms:

Life form	#Spp	%Cover	LF code
Large Herb	2	10%	LH
Medium Herb	3	20%	MH
Small or Prostrate Herb	3	15%	SH
Large Non-tufted Graminoid	2	20%	LNG
Medium to Small Tufted Graminoid	2	10%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
<b>Total understorey projective foliage cover</b>		<b>80%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
LH	<i>Persicaria decipiens</i>	Slender Knotweed
MH	<i>Myriophyllum verrucosum</i>	Red Water-milfoil
MH	<i>Potamogeton pectinatus</i>	Fennel Pondweed
SH	<i>Lemna disperma</i>	Common Duckweed
SH	<i>Azolla filiculoides</i>	Pacific Azolla
SH	<i>Mimulus repens</i>	Creeping Monkey-flower
SH	<i>Wolffia australiana</i>	Tiny Duckweed
LNG	<i>Typha orientalis</i>	Broad-leaf Cumbungi
LNG	<i>Phragmites australis</i>	Common Reed
MTG	<i>Triglochin procerum</i> s.l.	Water Ribbons
MNG	<i>Bolboschoenus caldwellii</i>	Salt Club-sedge

### Recruitment:

Episodic/Flood. Desirable period between disturbances is 5 years.

### Organic Litter:

10% Cover

### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	<i>Aster subulatus</i>	Aster-weed	high	low
MH	<i>Cotula coronopifolia</i>	Water Buttons	high	high

# EVC 653: Aquatic Herbland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 710: Damp Heathland

### Description:

Developed on sites of intermittent waterlogging, typically wet in winter and dry in summer, with low nutrient availability. Closed tall heathland, or scrub if long unburnt. There is a dense ground layer of rushes and sedges, and sometimes emergent eucalypts.

### Understorey:

Life form	#Spp	%Cover	LF code
Medium Shrub	5	40%	MS
Small Shrub	5	10%	SS
Prostrate Shrub	1	1%	PS
Medium Herb	4	10%	MH
Small or Prostrate Herb	3	10%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	4	5%	MTG
Medium to Tiny Non-tufted Graminoid	2	10%	MNG
Scrambler or Climber	3	5%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Allocasuarina paludosa</i>	Scrub Sheoak
MS	<i>Banksia marginata</i>	Silver Banksia
SS	<i>Hibbertia sericea</i> s.l.	Silky Guinea-flower
SS	<i>Platylobium obtusangulum</i>	Common Flat-pea
SS	<i>Pimelea humilis</i>	Common Rice-flower
SS	<i>Dillwynia glaberrima</i>	Smooth Parrot-pea
PS	<i>Acrotriche serrulata</i>	Honey-pots
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Selaginella uliginosa</i>	Swamp Selaginella
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
LTG	<i>Deyeuxia quadriseta</i>	Reed Bent-grass
LTG	<i>Xanthorrhoea minor</i> ssp. <i>lutea</i>	Small Grass-tree
LNG	<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
MTG	<i>Patersonia fragilis</i>	Short Purple-flag
MTG	<i>Lepidosperma concavum</i>	Sandhill Sword-sedge
MTG	<i>Burchardia umbellata</i>	Milkmaids
MNG	<i>Hypolaena fastigiata</i>	Tassel Rope-rush
MNG	<i>Baumea juncea</i>	Bare Twig-sedge
SC	<i>Cassytha pubescens</i> s.s.	Downy Dodder-laurel
SC	<i>Cassytha glabella</i>	Slender Dodder-laurel
SC	<i>Billardiera scandens</i>	Common Apple-berry

### Recruitment:

Episodic/Fire. Desirable period between disturbances is 30 years.

### Organic Litter:

20% cover

### Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low

# EVC 710: Damp Heathland Highlands – Southern Fall bioregion

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 793: Damp Heathy Woodland

#### Description:

Woodland to 10 m tall with tall dense heathy understorey which becomes tall scrub if long unburnt in high rainfall areas. The ground layer consists of grasses, herbs, small shrubs and tough-leaved graminoids. Developed on sandy soils of moderate to low fertility, typically wet in winter due to impeding layer in soil and dry in summer.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	60 cm	10 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
15%	<i>Eucalyptus cephalocarpa</i> s.l.	Mealy Stringybark
	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus ovata</i>	Swamp Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	5	30%	MS
Small Shrub	4	5%	SS
Prostrate Shrub	2	1%	PS
Medium Herb	3	5%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	3	10%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	1	5%	GF
Bryophytes/Lichens	na	20%	BL
Soil Crust	na	10%	S/C
<b>Total understorey projective foliage cover</b>		<b>85%</b>	

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Epacris impressa</i>	Common Heath
MS	<i>Banksia marginata</i>	Silver Banksia
MS	<i>Kunzea ericoides</i>	Burgan
SS	<i>Hibbertia riparia</i>	Erect Guinea-flower
SS	<i>Hovea heterophylla</i>	Common Hovea
PS	<i>Acrotriche serrulata</i>	Honey-pots
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
SH	<i>Drosera whittakeri</i> ssp. <i>aberrans</i>	Scented Sundew
LTG	<i>Xanthorrhoea minor</i> ssp. <i>lutea</i>	Small Grass-tree
MTG	<i>Themeda triandra</i>	Kangaroo Grass
MTG	<i>Lepidosperma filiforme</i>	Common Rapier-sedge
GF	<i>Pteridium esculentum</i>	Austral Bracken
SC	<i>Cassytha glabella</i>	Slender Dodder-laurel

# EVC 793: Damp Heathy Woodland Highlands – Southern Fall bioregion

**Recruitment:**

Episodic/Fire. Desirable period between disturbances is 30 years.

**Organic Litter:**

20 % cover

**Logs:**

10 m/0.1 ha.

**Weediness:**

<b>LF Code</b>	<b>Typical Weed Species</b>	<b>Common Name</b>	<b>Invasive</b>	<b>Impact</b>
MH	<i>Hypochaeris radicata</i>	Cat's Ear	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands - Southern Fall bioregion

## EVC 851: Stream Bank Shrubland

### Description:

Tall shrubland to 8 m tall above a ground layer of sedges and herbs. A sparse eucalypt overstorey to 15 m tall may sometimes be present. Occurs along rivers and major streams where the watercourse consists of either rocky banks, a flat rocky stream bed or broad gravel banks which are often dry but are also regularly flooded by fast flowing waters.

+ eucalypt woodland only components (ignore when assessing shrublands and standardise site condition score as required)

### Large trees<sup>+</sup>:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	10 / ha

### Tree Canopy Cover<sup>+</sup>:

%cover	Character Species	Common Name
10%	<i>Eucalyptus camaldulensis</i>	River Red-gum

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree <sup>+</sup>		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	4	20%	MS
Large Herb	3	5%	LH
Medium Herb	12	20%	MH
Small or Prostrate Herb	4	10%	SH
Large Tufted Graminoid	3	10%	LTG
Large Non-tufted Graminoid	3	10%	LNG
Medium to Small Tufted Graminoid	10	15%	MTG
Medium to Tiny Non-tufted Graminoid	5	10%	MNG
Scrambler or Climber	2	5%	SC

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Leptospermum lanigerum</i>	Woolly Tea-tree
MS	<i>Hymenanthera dentata</i> s.l.	Tree Violet
MS	<i>Bursaria spinosa</i> ssp. <i>spinosa</i>	Sweet Bursaria
MS	<i>Callistemon sieberi</i>	River Bottlebrush
LH	<i>Persicaria decipiens</i>	Slender Knotweed
LH	<i>Epilobium billardierianum</i>	Variable Willow-herb
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Hydrocotyle verticillata</i>	Shield Pennywort
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
SH	<i>Crassula helmsii</i>	Swamp Crassula
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Apium prostratum</i> ssp. <i>prostratum</i>	Sea Celery
SH	<i>Hydrocotyle verticillata</i>	Shield Pennywort
LTG	<i>Poa labillardierei</i>	Common Tussock-grass
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LNG	<i>Phragmites australis</i>	Common Reed
LNG	<i>Schoenoplectus tabernaemontani</i>	River Club-sedge
MTG	<i>Triglochin procerum</i> s.l.	Water Ribbons
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
MNG	<i>Ficinia nodosa</i>	Knobby Club-sedge
SC	<i>Calystegia sepium</i>	Large Bindweed



# EVC 851: Stream Bank Shrubland Highlands – Southern Fall bioregion

## Recruitment:

Continuous

## Organic Litter:

40 % cover

## Logs:

10 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
T	<i>Crataegus monogyna</i>	Hawthorn	high	high
MS	<i>Rosa rubiginosa</i>	Sweet Briar	high	high
MS	<i>Ulex europaeus</i>	Gorse	high	high
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
LH	<i>Rumex crispus</i>	Curled Dock	high	low
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
LH	<i>Rumex conglomeratus</i>	Clustered Dock	high	low
LH	<i>Sonchus asper</i> s.l.	Rough Sow-thistle	high	low
LH	<i>Helminthotheca echioides</i>	Ox-tongue	high	low
LH	<i>Aster subulatus</i>	Aster-weed	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Trifolium angustifolium</i> var. <i>angustifolium</i>	Narrow-leaf Clover	high	low
MH	<i>Trifolium dubium</i>	Suckling Clover	high	low
MH	<i>Plantago major</i>	Greater Plantain	high	low
SH	<i>Trifolium repens</i> var. <i>repens</i>	White Clover	high	low
LTG	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MTG	<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome	high	low
MTG	<i>Nassella neesiana</i>	Chilean Needle-grass	high	high
MTG	<i>Bromus diandrus</i>	Great Brome	high	low
MTG	<i>Lolium perenne</i>	Perennial Rye-grass	high	low
MTG	<i>Romulea rosea</i>	Onion Grass	high	low
MTG	<i>Bromus catharticus</i>	Prairie Grass	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Briza minor</i>	Lesser Quaking-grass	high	low
MNG	<i>Cynosurus echinatus</i>	Rough Dog's-tail	high	low
MNG	<i>Dactylis glomerata</i>	Cocksfoot	high	high
MNG	<i>Avena barbata</i>	Bearded Oat	high	low
MNG	<i>Paspalum distichum</i>	Water Couch	high	high
SC	<i>Galium aparine</i>	Cleavers	high	low
SC	<i>Vicia sativa</i> ssp. <i>sativa</i>	Common Vetch	high	low

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## EVC/Bioregion Benchmark for Vegetation Quality Assessment

### Highlands Southern Fall Bioregion

#### EVC 851\_61: Treed Stream Bank Shrubland

##### Description:

Tall shrubland to 8 m tall above a ground layer of sedges and herbs. A sparse eucalypt overstorey to 15 m tall is present. Occurs along rivers and major streams where the watercourse consists of either rocky banks, a flat rocky stream bed or broad gravel banks which are often dry but are also regularly flooded by fast flowing waters.

##### Large Trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus spp.</i>	70 cm	10 / ha

##### Tree Canopy Cover:

%cover	Character Species	Common Name
10%	<i>Eucalyptus camaldulensis</i>	River Red-gum

##### Understorey:

Lifeform	#Spp	%Cover	LF Code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	4	20%	MS
Large Herb	3	5%	LH
Medium Herb	12	20%	MH
Small or Prostrate Herb	4	10%	SH
Large Tufted Graminoid	3	10%	LTG
Large Non-Tufted Graminoid	3	10%	LNG
Medium to Small Tufted Graminoid	10	15%	MTG
Medium to Tiny Non-Tufted Graminoid	5	10%	MNG
Scrambler or Climber	2	5%	SC

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Acacia melanoxylon</i>	Blackwood
MS	<i>Bursaria spinosa subsp. spinosa</i>	Sweet Bursaria
MS	<i>Callistemon sieberi</i>	River Bottlebrush
MS	<i>Leptospermum lanigerum</i>	Woolly Tea-tree
MS	<i>Meliccytus dentatus s.l.</i>	Tree Violet
LH	<i>Epilobium billardierianum</i>	Variable Willow-herb
LH	<i>Persicaria decipiens</i>	Slender Knotweed
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
SH	<i>Apium prostratum subsp. prostratum</i>	Sea Celery
SH	<i>Crassula helmsii</i>	Swamp Crassula
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Hydrocotyle verticillata</i>	Shield Pennywort
SH	<i>Hydrocotyle verticillata</i>	Shield Pennywort

# EVC 851\_61: Treed Stream Bank Shrubland

LF Code	Species typical of at least part of EVC range	Common Name
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Poa labillardierei</i>	Common Tussock-grass
LNG	<i>Phragmites australis</i>	Common Reed
LNG	<i>Schoenoplectus tabernaemontani</i>	River Club-sedge
MTG	<i>Triglochin procera s.l.</i>	Water Ribbons
MNG	<i>Ficinia nodosa</i>	Knobby Club-sedge
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
SC	<i>Calystegia sepium subsp. roseata</i>	Large Bindweed

## Recruitment:

Continuous.

## Organic Litter:

40 % cover

## Logs:

10 m/0.1ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LTG	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	high	high
MTG	<i>Nassella neesiana</i>	Chilean Needle-grass	high	high
MS	<i>Ulex europaeus</i>	Gorse	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MS	<i>Rosa rubiginosa</i>	Sweet Briar	high	high
MNG	<i>Paspalum distichum</i>	Water Couch	high	high
MNG	<i>Dactylis glomerata</i>	Cocksfoot	high	high
T	<i>Crataegus monogyna</i>	Hawthorn	high	high
MTG	<i>Bromus hordeaceus subsp. hordeaceus</i>	Soft Brome	high	low
MTG	<i>Bromus diandrus</i>	Great Brome	high	low
LH	<i>Rumex crispus</i>	Curled Dock	high	low
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Trifolium angustifolium var. angustifolium</i>	Narrow-leaf Clover	high	low
MH	<i>Trifolium dubium</i>	Suckling Clover	high	low
MH	<i>Plantago major</i>	Greater Plantain	high	low
SH	<i>Trifolium repens var. repens</i>	White Clover	high	low
LH	<i>Aster subulatus</i>	Aster-weed	high	low
MTG	<i>Briza minor</i>	Lesser Quaking-grass	high	low
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
SC	<i>Vicia sativa subsp. sativa</i>	Common Vetch	high	low
MNG	<i>Cynosurus echinatus</i>	Rough Dog's-tail	high	low
MNG	<i>Avena barbata</i>	Bearded Oat	high	low
LH	<i>Helminthotheca echioides</i>	Ox-tongue	high	low
MTG	<i>Lolium perenne</i>	Perennial Rye-grass	high	low
MTG	<i>Bromus catharticus</i>	Prairie Grass	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
LH	<i>Sonchus asper s.l.</i>	Rough Sow-thistle	high	low
LH	<i>Rumex conglomeratus</i>	Clustered Dock	high	low
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
SC	<i>Galium aparine</i>	Cleavers	high	low
MTG	<i>Romulea rosea</i>	Onion Grass	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 877: Lowland Herb-rich Forest

#### Description:

Primarily occurs in gullies and along lower slopes close to minor drainage lines. Soils are reasonably fertile colluvial loams. Open eucalypt forest to 20 m tall with a range of medium shrubs conspicuous in the mid-stratum. The ground layer is dominated by a dense cover of grasses and a high diversity of tussock-forming graminoids and herbs.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus angophoroides</i>	Apple Box
	<i>Eucalyptus globoidea</i>	White Stringybark

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	3	30%	MS
Small Shrub	2	5%	SS
Large Herb	2	5%	LH
Medium Herb	8	15%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	10%	LTG
Medium to Small Tufted Graminoid	3	10%	MTG
Medium to Tiny Non-tufted Graminoid	2	5%	MNG
Ground Fern	3	20%	GF
Scrambler or Climber	2	5%	SC
Bryophytes/Lichens	na	10%	BL

# EVC 877: Lowland Herb-rich Forest Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Olearia argophylla</i>	Musk Daisy-bush
MS	<i>Kunzea ericoides</i>	Burgan
MS	<i>Pimelea axiflora</i>	Bootlace Bush
MS	<i>Cassinia trinerva</i>	Three-nerved Cassinia
MS	<i>Callistemon pallidus</i>	Lemon Bottlebrush
SS	<i>Tetralochea pilosa</i>	Hairy Pink-bells
SS	<i>Hibbertia obtusifolia</i>	Grey Guinea-flower
SS	<i>Hibbertia calycina</i>	Juniper Guinea-flower
PS	<i>Acrotriche serrulata</i>	Honey-pots
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
LH	<i>Senecio linearifolius</i>	Fireweed Groundsel
MH	<i>Veronica plebeia</i>	Trailing Speedwell
MH	<i>Viola hederacea sensu Willis (1972)</i>	Ivy-leaf Violet
MH	<i>Pterostylis concinna</i>	Trim Greenhood
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Oxalis exilis</i>	Shady Wood-sorrel
SH	<i>Opercularia varia</i>	Variable Stinkweed
SH	<i>Leptinella filicula</i>	Mountain Cotula
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
MTG	<i>Carex breviculmis</i>	Common Grass-sedge
MTG	<i>Lomandra filiformis ssp. filiformis</i>	Wattle Mat-rush
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Luzula meridionalis</i>	Common Woodrush
MNG	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass
MNG	<i>Entolasia marginata</i>	Bordered Panic
GF	<i>Calochlaena dubia</i>	Common Ground-fern
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Cheilanthes austrotenuifolia</i>	Green Rock-fern
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Comesperma volubile</i>	Love Creeper
SC	<i>Glycine clandestina</i>	Twining Glycine
SC	<i>Billardiera scandens</i>	Common Apple-berry

## Recruitment:

Continuous

## Organic Litter:

40 % cover

## Logs:

20 m/0.1 ha.

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	<i>Hypochaeris radicata</i>	Cat's Ear	high	low
MH	<i>Cerastium glomeratum s.l.</i>	Common Mouse-ear Chickweed	high	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment Highlands – Southern Fall bioregion

## EVC 895: Escarpment Shrubland

### Description:

Occurs on rocky escarpments in steep valleys or gorges, associated with limestone or basalt. Sites have moderate to high fertility, are well-drained but subject to regular summer drought due to shallow soils. . Eucalypt woodland to 15 m tall or non-eucalypt shrubland to 8 m tall, with occasional eucalypts; lichen-covered rock outcrops are common.

+ eucalypt woodland only components (ignore when assessing shrubland areas and standardise site condition score as required)

### Large trees\*:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	15 / ha

### Tree Canopy Cover:

%cover	Character Species	Common Name
15%	<i>Acacia implexa</i>	Lightwood
	<i>Allocasuarina verticillata</i>	Drooping Sheoak
	<i>Acacia mearnsii</i>	Black Wattle
	<i>Bursaria spinosa</i>	Sweet Bursaria
	<i>Eucalyptus radiata</i>	Narrow-leaf Peppermint

### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree <sup>+</sup>		5%	IT
Understorey Tree or Large Shrub <sup>+</sup>	3	10%	T
Medium Shrub	3	10%	MS
Small Shrub	2	5%	SS
Large Herb	3	5%	LH
Medium Herb	4	10%	MH
Small or Prostrate Herb	5	5%	SH
Large Tufted Graminoid	1	5%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	9	25%	MTG
Medium to Tiny Non-tufted Graminoid	3	5%	MNG
Ground Fern	1	5%	GF
Scrambler or Climber	1	5%	SC
Bryophytes/Lichens	na	20%	BL
Soil Crust	na	10%	S/C

LF Code	Species typical of at least part of EVC range	Common Name
MS	<i>Rhagodia parabolica</i>	Fragrant Saltbush
MS	<i>Hymenanthera dentata</i> s.l.	Tree Violet
SS	<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	Ruby Saltbush
LH	<i>Wahlenbergia communis</i> s.l.	Tufted Bluebell
MH	<i>Oxalis perennans</i>	Grassland Wood-sorrel
MH	<i>Maireana enchylaenoides</i>	Wingless Bluebush
MH	<i>Einadia nutans</i> ssp. <i>nutans</i>	Nodding Saltbush
SH	<i>Chamaesyce drummondii</i>	Flat Spurge
SH	<i>Dichondra repens</i>	Kidney-weed
LTG	<i>Austrostipa bigeniculata</i>	Kneed Spear-grass
MTG	<i>Austrodanthonia racemosa</i> var. <i>racemosa</i>	Stiped Wallaby-grass
MTG	<i>Austrodanthonia setacea</i>	Bristly Wallaby-grass
MNG	<i>Panicum effusum</i>	Hairy Panic
GF	<i>Cheilanthes distans</i>	Bristly Cloak-fern
SC	<i>Clematis microphylla</i>	Small-leaved Clematis
SC	<i>Convolvulus erubescens</i> spp. agg.	Pink Bindweed

# EVC 895: Escarpment Shrubland - Highlands Southern Fall bioregion

## Recruitment:

Continuous

## Organic Litter:

20 % cover

## Logs:

15 m/0.1 ha<sup>+</sup>.

5 m/0.1 ha. (note: large log class does not apply)

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
T	<i>Schinus molle</i>	Pepper Tree	high	high
MS	<i>Lycium ferocissimum</i>	African Box-thorn	high	high
MS	<i>Genista monspessulana</i>	Montpellier Broom	high	high
SS	<i>Marrubium vulgare</i>	Horehound	high	high
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
LH	<i>Helminthotheca echioides</i>	Ox-tongue	high	low
LH	<i>Lactuca serriola</i>	Prickly Lettuce	high	low
LH	<i>Sisymbrium officinale</i>	Hedge Mustard	high	high
LH	<i>Sonchus asper</i> s.l.	Rough Sow-thistle	high	low
LH	<i>Verbascum thapsus</i> ssp. <i>thapsus</i>	Great Mullein	high	high
LH	<i>Echium plantagineum</i>	Paterson's Curse	high	high
LH	<i>Centaureum tenuiflorum</i>	Slender Centaury	high	low
LH	<i>Foeniculum vulgare</i>	Fennel	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Trifolium arvense</i> var. <i>arvense</i>	Hare's-foot Clover	high	low
MH	<i>Trifolium subterraneum</i>	Subterranean Clover	high	low
MH	<i>Trifolium campestre</i> var. <i>campestre</i>	Hop Clover	high	low
MH	<i>Trifolium angustifolium</i> var. <i>angustifolium</i>	Narrow-leaf Clover	high	low
MH	<i>Lotus suaveolens</i>	Hairy Bird's-foot Trefoil	high	low
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low
SH	<i>Medicago polymorpha</i>	Burr Medic	high	low
SH	<i>Trifolium glomeratum</i>	Cluster Clover	high	low
SH	<i>Modiola caroliniana</i>	Red-flower Mallow	high	low
SH	<i>Aptenia cordifolia</i>	Heart-leaf Ice-plant	high	high
LTG	<i>Phalaris aquatica</i>	Toowoomba Canary-grass	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
LNG	<i>Avena fatua</i>	Wild Oat	high	low
MTG	<i>Nassella trichotoma</i>	Serrated Tussock	high	high
MTG	<i>Ehrharta longiflora</i>	Annual Veldt-grass	high	low
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MTG	<i>Bromus hordeaceus</i> ssp. <i>hordeaceus</i>	Soft Brome	high	low
MTG	<i>Sporobolus africanus</i>	Rat-tail Grass	high	high
MTG	<i>Vulpia bromoides</i>	Squirrel-tail Fescue	high	low
MTG	<i>Romulea rosea</i>	Onion Grass	high	low
MTG	<i>Pentaschistis airoides</i> ssp. <i>airoides</i>	False Hair-grass	high	low
MTG	<i>Lolium perenne</i>	Perennial Rye-grass	high	low
MTG	<i>Dactylis glomerata</i>	Cocksfoot	high	high
MTG	<i>Vulpia myuros</i>	Rat's-tail Fescue	high	low
MTG	<i>Bromus rubens</i>	Red Brome	high	low
MTG	<i>Avena barbata</i>	Bearded Oat	high	low
MTG	<i>Aira caryophylla</i>	Silvery Hair-grass	high	low
SC	<i>Vicia sativa</i> ssp. <i>sativa</i>	Common Vetch	low	low

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 902: Gully Woodland

#### Description:

Woodland or open forest to 20 m tall occurring along moderately steep gullies. Soils are mostly colluvial deposits of sands and silts. Characterised by a medium dense small tree and shrub layer above a grassy/sedgy understorey, often rich in herbs within the inter-tussock spaces.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	10 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
20%	<i>Eucalyptus viminalis</i>	Manna Gum
	<i>Eucalyptus ovata</i>	Swamp Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	4	15%	T
Medium Shrub	6	15%	MS
Small Shrub	1	1%	SS
Large Herb	2	1%	LH
Medium Herb	6	10%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	1	5%	LNG
Medium to Small Tufted Graminoid	7	15%	MTG
Medium to Tiny Non-tufted Graminoid	2	10%	MNG
Ground Fern	3	10%	GF
Scrambler or Climber	4	10%	SC
Bryophytes/Lichens	na	20%	BL

#### Recruitment:

Continuous

#### Organic Litter:

20 % cover

#### Logs:

10 m/0.1 ha.

# EVC 902: Gully Woodland Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia mearnsii</i>	Black Wattle
T	<i>Acacia melanoxylon</i>	Blackwood
T	<i>Bursaria spinosa</i>	Sweet Bursaria
T	<i>Allocasuarina littoralis</i>	Black Sheoak
MS	<i>Goodenia ovata</i>	Hop Goodenia
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Cassinia aculeata</i>	Dogwood
SS	<i>Rubus parvifolius</i>	Small-leaf Bramble
LH	<i>Senecio glomeratus</i>	Annual Fireweed
LH	<i>Senecio tenuiflorus</i>	Slender Fireweed
MH	<i>Acaena novae-zelandiae</i>	Bidgee-widgee
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Hypericum gramineum</i>	Small St John's-wort
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
SH	<i>Dichondra repens</i>	Kidneyweed
SH	<i>Oxalis exilis</i>	Shady Wood-sorrel
LTG	<i>Poa labillardierei</i>	Common Tussock-grass
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Elymus scaber</i> var. <i>scaber</i>	Common Wheat Grass
MTG	<i>Austrodanthonia racemosa</i> var. <i>racemosa</i>	Stpied Wallaby-grass
MTG	<i>Lepidosperma laterale</i> var. <i>laterale</i>	Variable Sword-sedge
MTG	<i>Poa morrisii</i>	Soft Tussock-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
MNG	<i>Poa tenera</i>	Slender Tussock-grass
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Adiantum aethiopicum</i>	Common Maidenhair
GF	<i>Doodia australis</i>	Common Rasp-fern
EP	<i>Amyema pendula</i>	Drooping Mistletoe
SC	<i>Clematis aristata</i>	Mountain Clematis
SC	<i>Pandorea pandorana</i>	Wonga Vine
SC	<i>Clematis microphylla</i>	Small-leaf Clematis
SC	<i>Comesperma volubile</i>	Love Creeper

## Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Chrysanthemoides monilifera</i>	Boneseed	high	high
MS	<i>Rubus fruticosus</i> spp. agg.	Blackberry	high	high
LH	<i>Plantago lanceolata</i>	Ribwort	high	low
LH	<i>Sonchus oleraceus</i>	Common Sow-thistle	high	low
LH	<i>Cirsium vulgare</i>	Spear Thistle	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MH	<i>Oxalis pes-caprae</i>	Soursob	high	high
MH	<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	high	low
MH	<i>Anagallis arvensis</i>	Scarlet Pimpernel	high	low
MH	<i>Centaureum erythraea</i>	Common Centaury	high	low
MH	<i>Oxalis incarnata</i>	Pale Wood-sorrel	high	high
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high
MTG	<i>Romulea rosea</i>	Onion Grass	high	low
MTG	<i>Ehrharta longiflora</i>	Annual Veldt-grass	high	low
MTG	<i>Ehrharta erecta</i> var. <i>erecta</i>	Panic Veldt-grass	high	high
MTG	<i>Briza maxima</i>	Large Quaking-grass	high	low
MNG	<i>Dactylis glomerata</i>	Cocksfoot	high	high
MNG	<i>Allium triquetrum</i>	Angled Onion	high	high
MNG	<i>Agrostis capillaris</i> s.l.	Brown-top Bent	high	high
SC	<i>Asparagus asparagoides</i>	Bridal Creeper	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 937: Swampy Woodland

#### Description:

Open eucalypt woodland to 15 m tall with ground-layer dominated by tussock grasses and/or sedges and often rich in herbs. Occurs on poorly drained, seasonally waterlogged heavy soils, primarily on swamp deposits but extending to suitable substrates within some landscapes of sedimentary origin.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	60 cm	15 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
15%	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus camphora</i> ssp. <i>humeana</i>	Mountain Swamp Gum
	<i>Eucalyptus ovata</i>	Swamp Gum
	<i>Eucalyptus cephalocarpa</i> s.s.	Mealy Stringybark

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	4	20%	MS
Small Shrub	2	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	2	10%	LH
Medium Herb	5	15%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	1	10%	LNG
Medium to Small Tufted Graminoid	3	10%	MTG
Medium to Small Non-tufted Graminoid	2	5%	MNG
Ground Fern	2	10%	GF
Bryophytes/Lichens	na	20%	BL



# EVC 937: Swampy Woodland Highlands – Southern Fall bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Melaleuca ericifolia</i>	Swamp Paperbark
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Ozothamnus ferrugineus</i>	Tree Everlasting
MS	<i>Epacris impressa</i>	Common Heath
SS	<i>Hibbertia riparia</i>	Erect Guinea-flower
PS	<i>Hibbertia procumbens</i>	Spreading Guinea-flower
LH	<i>Pterostylis longifolia</i> s.l.	Tall Greenhood
LH	<i>Stackhousia viminea</i>	Slender Stackhousia
MH	<i>Gonocarpus tetragynus</i>	Common Raspwort
MH	<i>Mazus pumilio</i>	Swamp Mazus
MH	<i>Gratiola peruviana</i>	Austral Brooklime
MH	<i>Centella cordifolia</i>	Centella
MH	<i>Pterostylis sanguinea</i>	Banded Greenhood
SH	<i>Opercularia varia</i>	Variable Stinkweed
LTG	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
LTG	<i>Austrostipa pubinodis</i>	Tall Spear-grass
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
LNG	<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge
MTG	<i>Schoenus apogon</i>	Common Bog-sedge
MTG	<i>Lepidosperma laterale</i>	Variable Sword-sedge
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
MNG	<i>Poa tenera</i>	Slender Tussock-grass
MNG	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
MNG	<i>Lepyrodia muelleri</i>	Common Scale-rush
MNG	<i>Empodisma minus</i>	Spreading Rope-rush
GF	<i>Pteridium esculentum</i>	Austral Bracken
GF	<i>Lindsaea linearis</i>	Screw Fern
SC	<i>Cassytha glabella</i>	Slender Dodder-laurel
SC	<i>Thysanotus patersonii</i>	Twining Fringe-lily

**Recruitment:**  
Continuous

**Organic Litter:**  
20 % cover

**Logs:**  
15 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rubus</i> sp. aff. <i>armeniacus</i>	Blackberry	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
LNG	<i>Holcus lanatus</i>	Yorkshire Fog	high	high
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high

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# EVC/Bioregion Benchmark for Vegetation Quality Assessment

## Highlands – Southern Fall bioregion

### EVC 938: Shrubby Gully Forest

#### Description:

An open eucalypt forest to woodland to 20 m tall confined to narrow bands along low gradient gullies on minor streams within foothills. Often associated with granite soils. The understorey is dominated by shrubs, sedges and ferns and lacks the diversity of herbs and grasses associated with drainage lines on more fertile soils.

#### Large trees:

Species	DBH(cm)	#/ha
<i>Eucalyptus</i> spp.	70 cm	20 / ha

#### Tree Canopy Cover:

%cover	Character Species	Common Name
30%	<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
	<i>Eucalyptus ovata</i>	Swamp Gum
	<i>Eucalyptus viminalis</i> ssp. <i>viminalis</i>	Manna Gum

#### Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	5	20%	MS
Medium Herb	5	10%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	3	15%	LTG
Large Non-tufted Graminoid	2	10%	LNG
Medium to Small Tufted Graminoid	3	10%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	4	20%	GF
Scrambler or Climber	2	1%	SC
Bryophytes/Lichens	na	20%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	<i>Acacia melanoxylon</i>	Blackwood
T	<i>Melaleuca squarrosa</i>	Scented Paperbark
T	<i>Melaleuca ericifolia</i>	Swamp Paperbark
MS	<i>Leptospermum continentale</i>	Prickly Tea-tree
MS	<i>Ozothamnus ferrugineus</i>	Tree Everlasting
MS	<i>Coprosma quadrifida</i>	Prickly Currant-bush
MS	<i>Goodenia ovata</i>	Hop Goodenia
MH	<i>Veronica plebeia</i>	Trailing Speedwell
MH	<i>Viola hederacea</i> sensu Willis (1972)	Ivy-leaf Violet
SH	<i>Oxalis corniculata</i> s.l.	Yellow Wood-sorrel
SH	<i>Dichondra repens</i>	Kidney-weed
SH	<i>Desmodium gunnii</i>	Southern Tick-trefoil
LTG	<i>Carex appressa</i>	Tall Sedge
LTG	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
LTG	<i>Poa labillardierei</i>	Common Tussock Grass
LTG	<i>Cyperus lucidus</i>	Leafy Flat-sedge
LNG	<i>Phragmites australis</i>	Common Reed
LNG	<i>Gahnia radula</i>	Thatch Saw-sedge
MTG	<i>Poa morrisii</i>	Soft Tussock-grass
MTG	<i>Lomandra filiformis</i>	Wattle Mat-rush
GF	<i>Polystichum proliferum</i>	Mother Shield-fern
GF	<i>Calochlaena dubia</i>	Common Ground-fern
SC	<i>Billardiera scandens</i>	Common Apple-berry

# EVC 938: Shrubby Gully Forest Highlands – Southern Fall bioregion

**Recruitment:**

Continuous

**Organic Litter:**

20 % cover

**Logs:**

15 m/0.1 ha.

**Weediness:**

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MS	<i>Rubus fruticosus</i> spp. agg.	Blackberry	high	high
MH	<i>Hypochoeris radicata</i>	Cat's Ear	high	low
MTG	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	high	high

Published by the Victorian Government Department of Sustainability and Environment April 2004

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