

The Tree Scheme

information on selecting species



for the
Kangaroo Island Zone



Kangaroo Island is a fascinating and complex land mass, with widely diverse habitats. Kangaroo Island is Australia's third largest island, with a length of 155 km, a maximum width of 50 km and an area of 4350 square km. The coastline is approximately 480 km long. About 30% of the vegetation of Kangaroo Island is under the protection of the Department for Environment and Heritage, or Heritage Agreements.

The Trees For Life zone is the whole of the island, which makes it large compared to some of the other 41 Tree Scheme zones. This booklet divides Kangaroo Island into 12 subzones. All seed provided by Trees For Life to people growing for Kangaroo Island is from Kangaroo Island, but it may not be from your subzone.

This booklet will help you select species for planting on your property on Kangaroo Island.

The natural vegetation depends on many factors, particularly soil type, annual rainfall and topography. To adequately describe the island we have designated a large number of subzones. This relatively large number, which is partly a result of the total area of Kangaroo Island, should not concern landholders wishing to revegetate their land - it is only necessary to concern yourself with the one or possibly two subzones in which your land lies. This booklet is a guide to help you work out which plants are appropriate to your site.

HOW TO USE THIS BOOKLET

Kangaroo Island can be separated into 4 major regions based upon the dominating soil types:

- A. Coastal calcareous sands (dune systems)
- B. Shallow soil overlaying limestone (Linois soils)
- C. Lateritic podsols (ironstone gravels)
- D. Soils associated with flats (low-lying plains)

These soil type regions have been separated into 9 subzones that also partly reflect the original plant associations. In addition 3 subzones cover anomalies. The following table shows the relationship of the soil type regions and the subzones, and gives the page where the subzone is described.

The map of the subzones is located in the centre of this booklet. Look at the map to see in which subzone your site lies.



Soil region	Subzone number	Subzone name	Page
Coastal sands	1	Gantheaume Dunes	6
Limestone	2	Linois Plains	9
	3	Coastal	11
Ironstone gravels	4	Seddon Plateau	13
	5	Gosse Plateau	16
	6	McDonnell Hills	19
	7	Penneshaw Ridges and Hills	24
Flats	8	Cygnets Plain	27
	9	McGillivray Plain	31
Anomalies	10	Wisanger Plateau	33
	11	Menzies Hills	35
	12	Dryland salinity	38

Now read the description of your subzone and select species from the lists to suit your area. The lists are in two parts. Part 1 lists the species that are usually available from Trees For Life. Part 2 lists other species that grow naturally in the subzone which you can grow fairly easily from seed that you have collected yourself. Some species listed may require propagation from cuttings.

Trees For Life provides a species list to people ordering through the Tree Scheme. The species list tabulates the conditions the different species prefer, and gives some information about the size and shape of the plant. Look up the species that are listed in this booklet for your subzone and choose the ones that are right for your site.

REVEGETATION

As well as helping with salinity and erosion, good revegetation projects will help to conserve the plants and animals that occur naturally in your area.



Look around

The plant associations do not strictly follow the subzones. Other factors influencing plant associations are the soil pH and mineral nutrients, the topography and available moisture. Only one major watercourse (Timber Creek) and one minor watercourse (Bugga-Bugga Creek) do not empty into the ocean. All watercourses influence the composition of the native vegetation along their length.

The subzone descriptions and lists are a guide to the species that are appropriate for your site. You can find out more by looking for native plant communities remaining on nearby roadsides or reserves. This will be the best indication of what grows naturally in your area. In many habitats each tree or large shrub has 20 or more understorey plants nearby. Aim to include the various strata in your revegetation program.

Conserve what is left

Native grasses and other understorey species often persist on roadsides, rocky outcrops and in grazed paddocks. Protect these areas and look for native plants on your site before digging or spraying. By carefully planting your tubestock plants you can avoid damage to existing local plants.

You might also have some original trees on your site. Try to put back the plants that once grew with them.

Protect existing areas of remnant vegetation by excluding all domestic stock. Facilitating natural regeneration can be very economical revegetation.

Choose the best method for your site

It may suit your project better to use other methods of revegetation. For larger projects talk to a local Landcare Officer about direct seeding. Some sites need no planting at all, and are best left to regenerate naturally.

Identifying plants

To identify plants on your site and in nearby areas of remnant vegetation use the books:

- *It's Blue With Five Petals- Kangaroo Island* by Ann Prescott,
- *Kangaroo Island Native Plants* by Ivan Holliday, Bev and Dean Overton,
- *Native Trees and Shrubs of South-Eastern Australia* by Leon Costermans,
- *Plants Of the Adelaide Plains and Hills* by Gilbert Dashorst and John Jessop, and
- *What Seed Is That?* by Neville Bonney.



You can get help with plant identification from Primary Industry Revegetation and Landcare Officers, Council Weed Control Officers, Council Natural Resources Officers, private revegetation advisors and interested local people.

Collect your own seed if you can

The plants that have evolved in your area are best adapted to grow in your area. We therefore recommend that you collect your own seed if you can. 'What Seed Is That?' will also help you with seed collection. If you collect your own seed, always collect from several plants in local naturally occurring populations, and keep a record of your seed sources.

A number of species included in the Part 2 lists are uncommon, or even endangered. Careful seed collection and propagation can be a great benefit to populations of less common species, but care is needed to ensure that your efforts produce a net benefit to the species. To collect seed or cuttings from plants with a conservation rating of uncommon or greater you also require a seed collection permit – even if collecting from your own land. Permits are issued by the Department of Environment and Heritage.

Think about looking after the nearby bushland areas that you use as seed sources. Refer to the book 'Stop Bushland Weeds' by Meg Robertson for guidance.

We do not recommend collecting species such as *Acacia cyclops* (western wattle) from the vicinity of Kingscote and Western Cove or *Albizia lophantha* (Cape Leeuwin wattle) because these are weeds. Another tree that has been planted extensively in the zone is *Eucalyptus ficifolia* (red flowered gum). This tree is a native to Albany, West Australia - it is not a local plant! *Acacia longifolia longifolia* (Sydney golden wattle) and *Acacia saligna* (Golden wreath wattle) are not local plants and are quite invasive on Kangaroo Island. However *Acacia longifolia sophorae* (Coastal wattle) is a local plant found along some of the coast and dune systems.

Don't tidy up

Dead trees and logs are vital habitat components, so resist the temptation to tidy up your site before planting. Branches and prickly twigs can be placed around seedlings as protection from wind and animals.

Remember

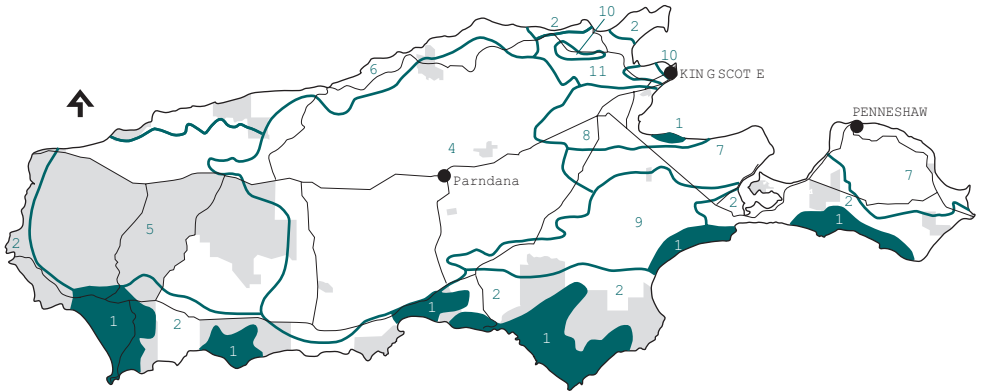
To encourage the return of natural flora and fauna to your area, it is better that your revegetation project has a few species that are right for your site than many species that are not.



SUBZONE DESCRIPTIONS

Subzone 1 - GANTHEAUME DUNES

Coastal mallee with wattles.



The dunes are mainly part of the conserved southern coastal area, except for the southern edge of Western Cove near Kingscote. Soils contain fragments of sea shells, covered by an organic layer 2.5 – 30 cm deep. Soils are alkaline with a pH of 7.5 or more. The soils are very fine and prone to wind erosion. Rainfall varies from 450 mm in the south eastern portion to 600 mm in the south west portion. Watercourses include the Eleanor, South-West and Rocky rivers. Vegetation is generally sparse mallee, usually fringing the innermost edge of the dunes. It usually comprises coastal white mallee, Port Lincoln mallee, Kingscote mallee and coastal wattles with a mixture of understorey species.

Part 1

Species usually available from Trees for Life:

Species

Acacia paradoxa
Acacia retinodes var uncifolia
Acacia triquetra
Allocasuarina verticillata
Dodonaea viscosa var angustissima
Eucalyptus diversifolia
Eucalyptus lansdowneana albopurpurea
Eucalyptus rugosa
Melaleuca acuminata
Melaleuca lanceolata

common name

kangaroo thorn
coast silver wattle
mallee wreath wattle
drooping sheoak
narrow leaved hop-bush
coastal white mallee
Port Lincoln mallee
Kingscote mallee
mallee honey myrtle
dryland tea tree



If you grow your own plants you can also order from the list below.

Species

Banksia marginata
Callitris gracilis

common name

silver banksia
cypress pine

Part 2

These are some other species in this subzone that are fairly easy to grow from seed. You can order materials to grow seed you have collected yourself.

There are some other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Acacia longifolia sophorae
Acrotriche cordata
Adriana klotzschii
Atriplex cinerea
Beyeria lechenaultii
Calytrix tetragona
Carpobrotus rossii
Clematis microphylla
Correa backhousiana var insularis
(syn *Correa reflexa var nummulariifolia*)
Dianella brevicaulis
Eucalyptus oleosa
Gahnia deusta
Goodenia varia
Kunzea pomifera
Lepidosperma gladiatum

Leucopogon parviflorus
Rhagodia candolleana
Scaevola crassifolia
Senecio odoratus var. odoratus
Stipa stipoides

common name

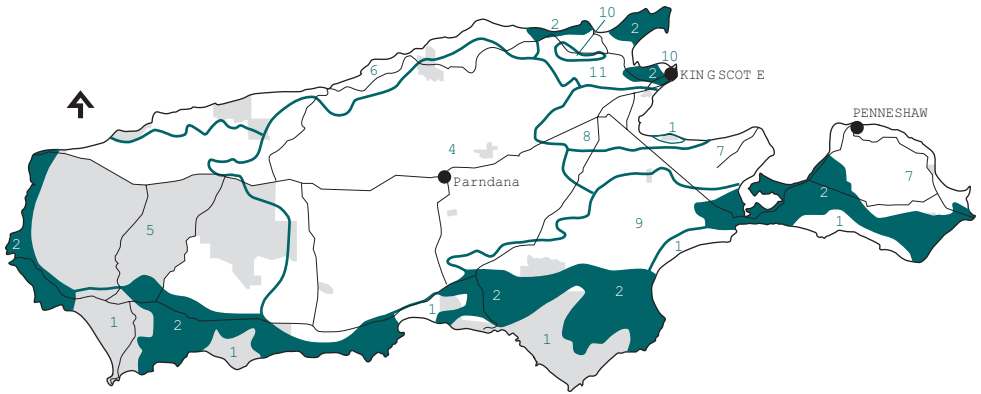
coastal wattle
coast ground-berry
coast bitterbush
coast saltbush
pale turpentine bush
common fringe-myrtle
angular pig-face
old mans beard
round-leaf correa

short-stem flax-lily
red mallee
limestone saw-sedge
sticky goodenia
muntries
coast sword-sedge
(not easy to propagate)
coastal bearded-heath
seaberry saltbush
cushion fanflower
scented groundsel
prickly spear-grass



Subzone 2 - LINOIS PLAINS

Stunted coastal mallee



The Linoi Plains occupy most of the western and southern coastal areas with a few pockets on the north coast. Soils are generally shallow sand to sandy loam, which is interspersed with areas of sheet limestone. Drainage is excellent. Soils range from acidic (pH 6.2) to alkaline (pH 7.8). Rainfall ranges from 450 mm in the south and north east to 650 mm in the extreme west. All watercourses terminate on the coast as shrub lined alluvial flats or coastal dunes.

Vegetation is stunted mallee on high-energy coastlines, becoming taller with increasing distance from the ocean.

Part 1

Species usually available from Trees For Life:

Species

Acacia cupularis
Acacia leiophylla
Acacia paradoxa
Acacia pycnantha
Acacia triquetra
Eucalyptus diversifolia
Eucalyptus lansdowneana ssp. *albopurpurea*
Eucalyptus ovata *
Eucalyptus rugosa
Melaleuca acuminata

common name

coastal umbrella bush
coast golden wattle
kangaroo thorn
golden wattle
mallee wreath wattle
coastal white mallee
Port Lincoln gum
swamp gum
Kingscote mallee
mallee honey-myrtle



Melaleuca lanceolata
Templetonia retusa

dryland tea tree
cockies tongue

* In extreme SW areas only

Part 2

There are some other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Atriplex cinerea

Beyeria lechenaultii

Correa backhousiana var *insularis*
(syn *Correa reflexa* var *nummulariifolia*)

Correa reflexa var. *orbicularis*
(syn *Correa reflexa* var. *reflexa*)

Correa pulchella

Danthonia geniculata

Dianella brevicaulis

Eucalyptus oleosa

Goodenia varia

Isolepis nodosa

Myoporum insulare

Olearia axillaris

Olearia rudis

Orthrosanthus multiflorus

Rhagodia candolleana

Stipa flavescens

common name

coast saltbush

pale turpentine bush

round-leaf correa

common correa

salmon correa

kneed wallaby-grass

short-stem flax-lily

red mallee

sticky goodenia

knobby club-rush

common boobialla

coastal daisy

azure daisy-bush

morning flag

seaberry saltbush

coast spear-grass



Subzone 3 - COASTAL

The coastal subzone is a thin strip, ranging from 5 to 100 metres inland from high water mark. Landforms range from low hills to towering sheer cliffs.

Soil is either linois type (shallow sand over limestone, sheet or fractured limestone), or sand dunes. Dunes are often seasonally mobile. Rainfall varies from 450 to 650 mm, and land in this zone would be subjected to frequent overnight dew and sea mists. This zone includes the mouth of most of the island's watercourses.

The vegetation is generally stunted coastal heath and mallee.

Part 1

Only a limited number of species for this highly specialised subzone are usually available from Trees For Life.

Species

Acacia cupularis

Acacia retinodes var. *uncifolia*

Acacia triquetra

Melaleuca gibbosa

Melaleuca lanceolata

common name

coastal umbrella bush

coast silver wattle

mallee wreath wattle

slender honey myrtle

dryland tea tree

Part 2

There are many other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Acacia longifolia var. *sophorae*

Acrotriche codata

Acrotriche patula

Adriana klotzschii

Atriplex cinerea

Carpobrotus rossii

Correa pulchella

Correa reflexa var. *orbicularis*
(syn *Correa reflexa* var. *reflexa*)

Dampiera lanceolata var. *insularis*

Dianella brevicaulis

Dodonaea humilis

common name

coastal wattle

coast ground-berry

shiny ground-berry

coast bitterbush

coast saltbush

native pigface

salmon correa

common correa

grooved dampiera

short-stem flax-lily

dwarf hop-bush

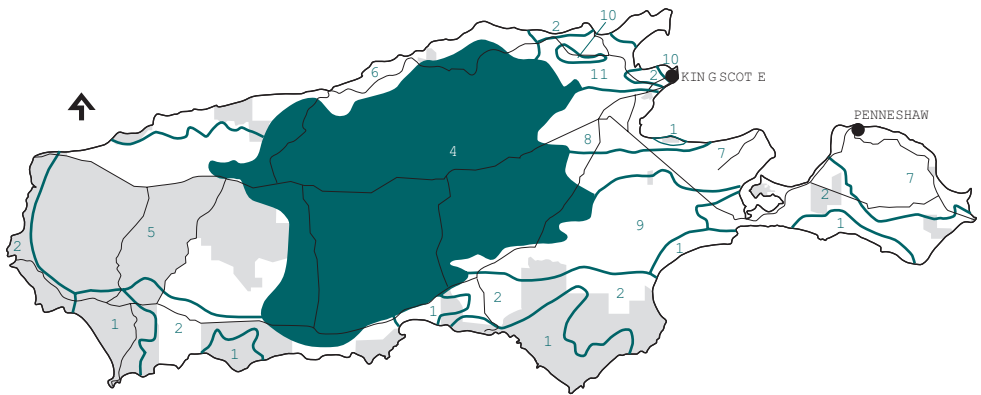


<i>Enchylaena tomentosa</i>	ruby saltbush
<i>Gahnia deusta</i>	limestone saw-sedge
<i>Goodenia varia</i>	sticky goodenia
<i>Hakea muelleriana</i>	desert hakea
<i>Hakea vittata</i>	limestone needlebush
<i>Helichrysum leucopsideum</i>	satin everlasting
<i>Hibbertia pallidiflora</i>	an hibbertia
<i>Hibbertia riparia</i>	erect guinea-flower
<i>Isolepis nodosa</i>	knobby club-rush
<i>Ixodia achillaeoides</i> ssp. <i>alata</i>	hills daisy
<i>Lasiopetalum discolor</i>	coast velvet-bush
<i>Lepidosperma gladiatum</i>	coast sword-sedge (not easy to propagate)
<i>Leucophyta brownii</i>	coast cushion bush
<i>Logania crassifolia</i>	coast logania
<i>Myoporum parvifolium</i>	creeping boobialla
<i>Olearia axillaris</i>	coastal daisy
<i>Olearia ramulosa</i>	twiggy daisy bush
<i>Pomaderris paniculosa</i>	mallee pomaderris
<i>Rhagodia candolleana</i>	seaberry saltbush
<i>Scaevola crassifolia</i>	cushion fanflower
<i>Spinifex hirsutus</i>	rolling spinifex
<i>Stipa flavescens</i>	coast spear-grass
<i>Stipa stipoides</i>	prickly spear-grass
<i>Swainsona lessertiifolia</i>	coast swainson-pea
<i>Tetragonia implexicoma</i>	bower spinach
<i>Zygophyllum billardierei</i>	coast twinleaf



Subzone 4 – SEDDON PLATEAU

Stringybark and eucalypt heath woodland



The Seddon plateau is the largest soil type area. It covers from Karatta in the South West to Birchmore in the east, to Cygnet River in the north, through to Western River in the North West.

The soils are predominantly ironstone gravel (laterite) over clay subsoil. All soils are acidic (pH 4.9 – 6.5) and some are prone to seasonal waterlogging.

Rainfall varies from 550 mm in the south east to 900 mm in the central west area.

The headwaters of most of the rivers on Kangaroo Island rise on the plateau. This includes the North-East, Middle, Cygnet, Harriet and Eleanor Rivers and Timber Creek.

There are areas of mallee habitat, with single-trunk eucalypt woodlands on hills, slopes and flats leading to riverine areas.



Part 1

Species usually available from Trees For Life:

Species

Acacia paradoxa

Allocasuarina muelleriana

Allocasuarina striata

Callistemon rugulosus

Eucalyptus baxteri

Eucalyptus cladocalyx

Eucalyptus cosmophylla

Eucalyptus fasciculosa

Eucalyptus obliqua

Leptospermum continentale

Melaleuca gibbosa

Melaleuca uncinata

common name

kangaroo thorn

slaty sheoak

small bull oak

scarlet bottle-brush

brown stringybark

sugar gum

cup or swamp gum

pink gum

messmate stringybark

prickly tea tree

slender honey-myrtle

broombush

Two species usually available through Trees For Life, but with only a very restricted distribution in this zone are:

Species

Eucalyptus leucoxydon

Eucalyptus viminalis cygnetensis

common name

southern blue gum

rough-barked manna gum

If you grow your own plants you can also order from the list below.

Species

Banksia marginata

Banksia ornata

Hakea rostrata

Xanthorrhoea semiplana tateana

common name

silver banksia

desert banksia

beaked hakea

Tate's grass-tree



Part 2

There are some other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Adenanthos terminalis
Astroloma conostephioides
Astroloma humifusum
Boronia edwardsii
Calytrix tetragona
Correa decumbens
Danthonia caespitosa
Daviesia brevifolia
Exocarpos cupressiformis
Goodenia ovata
Juncus kraussii
Juncus pallidus
Lasiopetalum schulzenii
Lepidosperma congestum

Lepidosperma viscidum

Platylobium obtusangulum
Prostanthera spinosa
Scaevola aemula
Thomasia petalocalyx

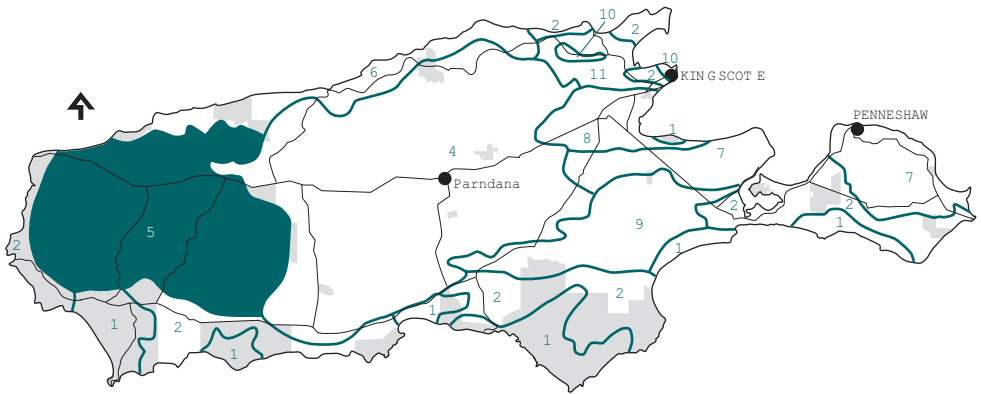
common name

yellow gland-flower
flame heath
native cranberry
island boronia
common fringe myrtle
spreading correa
white top
leafless bitter-pea
native cherry (cuttings only)
hop goodenia
sea rush
pale rush
drooping velvet-bush
clustered sword-sedge
(not easy to propagate)
sticky sword-sedge
(not easy to propagate)
holly flat-pea
spiny mintbush
fairly fanflower
paper-flower



Subzone 5 – GOSSE PLATEAU

Mixed eucalypt and heath woodlands



The Gosse Plateau is west of the Seddon plateau and takes in most of Flinders Chase National Park, Gosse Crown lands and the western most farms on Kangaroo Island.

The majority of the soils are deep acidic sand (pH 4.9 – 6.5) that overlay laterite and clay. The soils of the hilly areas of the plateau are shallower and heavier with frequent quartz outcrops, and are prone to wind and water erosion.

Rainfall varies from 600 mm in the south to 800 mm in the eastern portion of the plateau. Watercourses draining to the south are the South West River, and the North-West arm of the Stun'sail Boom River. Watercourses draining to the north are the de Mole and Western rivers.

The vegetation is dominated by stringybark, pink gum and sugar gum.

Part 1

Species usually available from Trees For Life:

Species

Acacia cupularis
Acacia myrtifolia
Acacia paradoxa
Acacia pycnantha

common name

coastal umbrella bush
myrtle wattle
kangaroo thorn
golden wattle



<i>Acacia retinodes</i> (swamp form)	wirilda
<i>Allocasuarina muelleriana</i>	slaty sheoak
<i>Allocasuarina striata</i>	small bull oak
<i>Allocasuarina verticillata</i>	drooping sheoak
<i>Callistemon rugulosus</i>	scarlet bottle-brush
<i>Eucalyptus baxteri</i>	brown stringybark
<i>Eucalyptus cladocalyx</i>	sugar gum
<i>Eucalyptus cosmophylla</i>	cup or swamp gum
<i>Eucalyptus diversifolia</i>	coastal white mallee
<i>Eucalyptus fasciculosa</i>	pink gum
<i>Eucalyptus lansdowneana albopurpurea</i>	Port Lincoln gum
<i>Eucalyptus remota</i>	Kangaroo Island mallee ash
<i>Eucalyptus rugosa</i>	Kingscote mallee
<i>Leptospermum continentale</i>	prickly tea-tree
<i>Leptospermum lanigerum</i>	silky tea-tree
<i>Melaleuca brevifolia</i>	short-leaf honey-myrtle
<i>Melaleuca gibbosa</i>	slender honey-myrtle
<i>Melaleuca lanceolata</i>	dryland tea-tree
<i>Melaleuca uncinata</i>	broombush

If you grow your own plants you can also order from the list below.

Species

Banksia marginata
Banksia ornata
Bursaria spinosa
Callitris rhomboidea
Hakea rostrata
Xanthorrhoea semiplana ssp. tateana

common name

silver banksia
desert banksia
sweet bursaria
Port Jackson pine
beaked hakea
Tate's grass-tree



Part 2

There are some other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Acacia dodonaeifolia (coastal areas)

Adenanthos macropodiana

Adenanthos terminalis

Astroloma conostephioides

Beyeria lechenaultii

Bulbine semibarbata

Calytrix tetragona

Carpobrotus rossii

Correa decumbens

Correa reflexa var. *orbicularis*

(syn *Correa reflexa* var. *reflexa*)

Dianella revoluta

Dodonaea viscosa ssp. *angustissima*

Enchylaena tomentosa

Gahnia sieberiana

Gahnia trifida

Hakea muelleriana

Juncus pallidus

Leptospermum myrsinoides

Melaleuca squamea

Myoporum viscosum

Orthrosanthus multiflorus

Prostanthera spinosa

Pultenaea villifera var. *glabrescens*

Stipa flavescens

Tetragonia implexicoma

Thomasia petalocalyx

common name

sticky wattle

Kangaroo Island gland-flower

yellow gland-flower

flame heath

pale turpentine bush

small leek-lily

common fringe myrtle

native pigface

spreading correa

common correa

black anther flax-lily

narrow leaved hop-bush

ruby saltbush

red-fruit cutting-grass

cutting grass

desert hakea

pale rush

heath tea-tree

swamp honey-myrtle

sticky boobialla

morning flag

spiny mintbush

yellow bush-pea

coast spear-grass

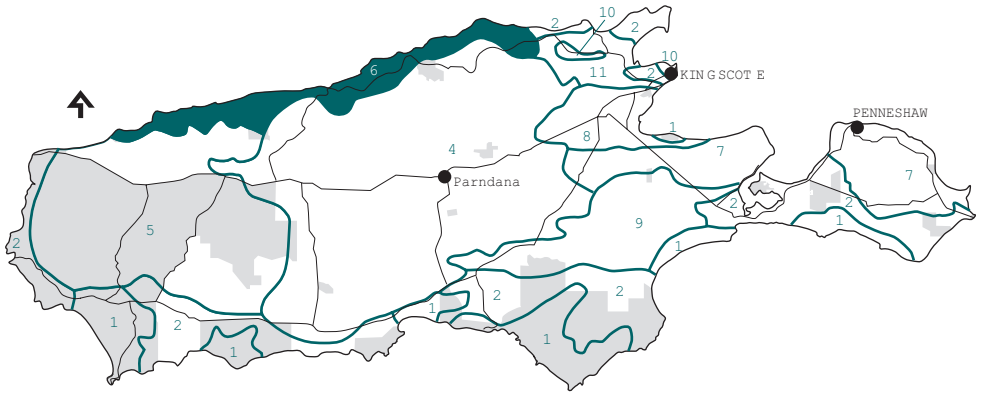
bower spinach

paper flower



Subzone 6 - McDONNELL HILLS

Sugar gum and sheoak woodland



This zone is on the steeper northern slopes of the Island from Dashwood Bay in the East to Cape Torrens in the west. The soils are mainly shallow sands interspersed with rock outcrops of quartz, schists and weathering skeletal soils. They are neutral with pH about 7.

Rainfall varies from 525 mm in the east to 650 mm in the west. Watercourses comprise the coastal mouth of the Middle, Western and de Mole Rivers.

Vegetation is a mixture of coastal mallee, sheoak woodland with sugar gums and wattle.

Part 1

Species usually available from Trees For Life:

Species

Acacia dodonaeifolia
Acacia paradoxa
Acacia retinodes (swamp form)
Allocasuarina striata
Allocasuarina verticillata
Dodonaea viscosa spatulata
Eucalyptus baxteri
Eucalyptus cladocalyx
Eucalyptus cosmophylla

common name

sticky wattle
kangaroo thorn
wirilda
small bull oak
drooping sheoak
sticky hop-bush
brown stringybark
sugar gum
cup or swamp gum



<i>Eucalyptus diversifolia</i>	coastal white mallee
<i>Eucalyptus fasciculosa</i>	pink gum
<i>Leptospermum continentale</i>	prickly tea-tree
<i>Melaleuca gibbosa</i>	slender honey-myrtle

If you grow your own plants you can also order from the list below.

Species

<i>Banksia marginata</i>	silver banksia
<i>Banksia ornata</i>	desert banksia
<i>Bursaria spinosa</i>	sweet bursaria
<i>Hakea rostrata</i>	beaked hakea
<i>Xanthorrhoea semiplana tateana</i>	Tate's grass-tree

common name

Part 2

There are some other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

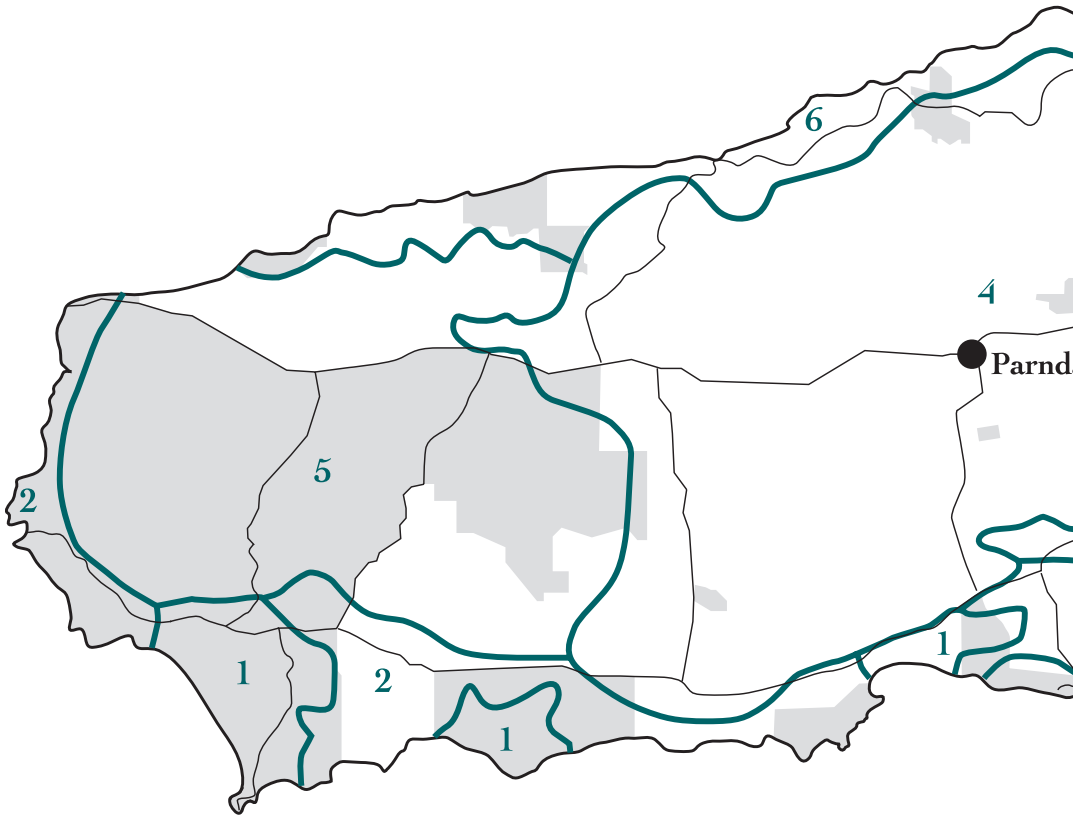
Species

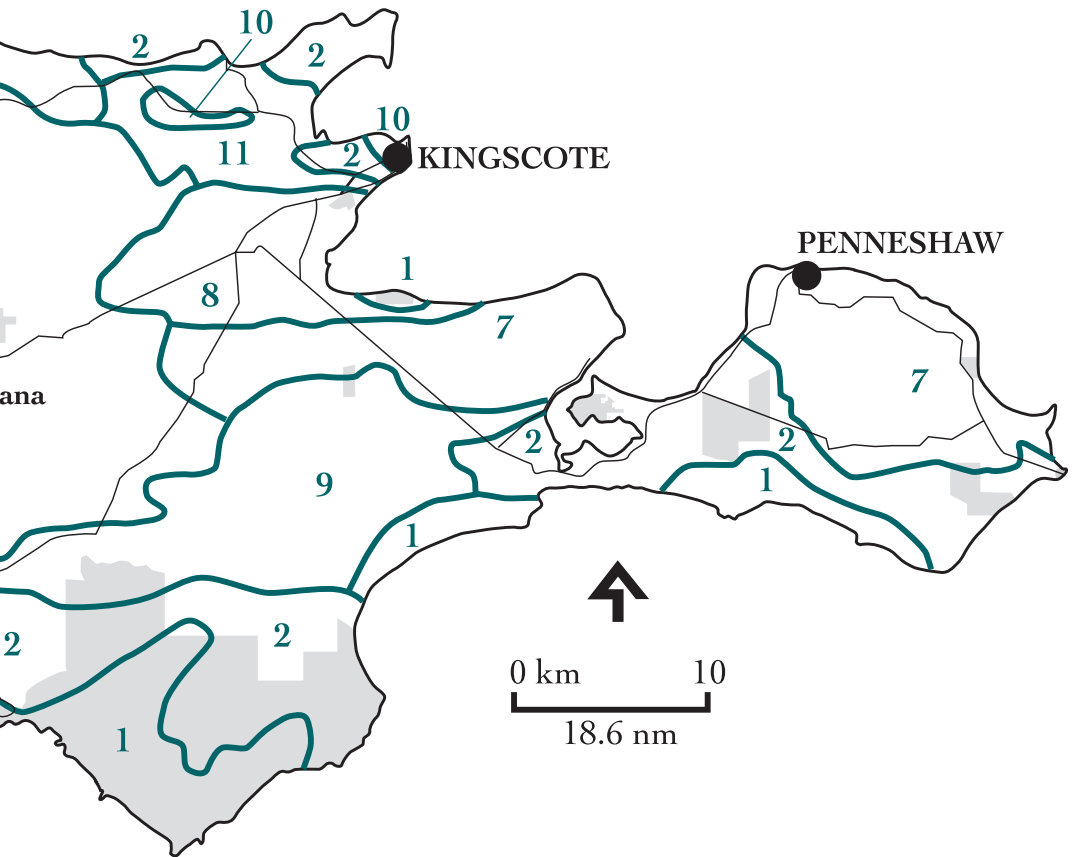
<i>Acacia acinacea</i>	gold-dust wattle
<i>Adenanthos macropodiana</i>	Kangaroo Island gland-flower
<i>Adenanthos terminalis</i>	yellow gland flower
<i>Beyeria lechenaultii</i>	pale turpentine bush
<i>Carpobrotus rossii</i>	native pigface
<i>Gahnia sieberiana</i>	red-fruit cutting-grass
<i>Goodenia ovata</i>	hop goodenia
<i>Isolepis nodosa</i>	knobby club rush
<i>Juncus pallidus</i>	pale rush
<i>Lasiopetalum schulzenii</i>	drooping velvet bush
<i>Lepidosperma viscidum</i>	sticky sword sedge (not easy to propagate)
<i>Myoporum viscosum</i>	sticky boobialla
<i>Olearia ramulosa</i>	twiggy daisy-bush
<i>Orthrosanthus multiflorus</i>	morning flag
<i>Pittosporum phylliraeoides</i>	native apricot
<i>Platylobium obtusangulum</i>	holly flat-pea
<i>Thomasia petalocalyx</i>	paper flower

common name



KANGAROO ISLAND SUBZONES

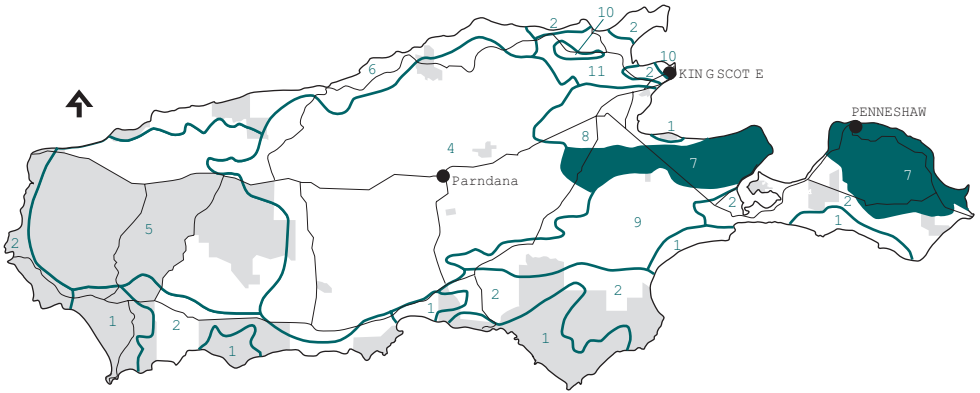






Subzone 7 – PENNESHAW HILLS AND RIDGES

Kangaroo Island narrow-leaf mallee bushland



This zone occupies most of the northern area of Dudley Peninsula with a narrow tongue extending west of American River for 35 km. Soils are sand over clay, with some pockets of gilgais (heavy swelling clays). Soils are either alkaline, or acid sands to lighter sandy loams with non-wetting properties. There is also some laterite.

Rainfall varies from 500 mm to 550 mm. Most areas are well drained although there are pockets subject to winter waterlogging.

The vegetation is characterised by Kangaroo Island narrow leaf mallee bushland with a complex understorey.

Part 1

Species usually available from Trees For Life:

Species

Acacia calamifolia
Acacia cupularis
Acacia dodonaeifolia
Acacia myrtifolia
Acacia paradoxa
Acacia pycnantha
Allocasuarina striata
Allocasuarina verticillata
Dodonaea viscosa angustissima
Eucalyptus cladocalyx

common name

wallowa
coastal umbrella bush
sticky wattle
myrtle wattle
kangaroo thorn
golden wattle
small bull oak
drooping sheoak
narrow leaved hop-bush
sugar gum



<i>Eucalyptus cneorifolia</i>	K I narrow leaved mallee
<i>Eucalyptus diversifolia</i>	coastal white mallee
<i>Eucalyptus lansdowneana albopurpurea</i>	Port Lincoln gum
<i>Eucalyptus leucoxylon</i>	southern blue gum
<i>Eucalyptus rugosa</i>	Kingscote mallee
<i>Melaleuca lanceolata</i>	dryland tea-tree
<i>Melaleuca uncinata</i>	broombush

If you grow your own plants you can also order from the list below.

Species

Xanthorrhoea semiplana tateana

common name

Tate's grass-tree

Part 2

There are many other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Astroloma conostephioides

Beyeria lechenaultii

Cassinia uncata

Clematis microphylla

Correa backhousiana var insularis

(syn *Correa reflexa var nummulariifolia*)

Dianella brevicaulis

Goodenia ovata

Hakea muelleriana

Hakea vittata

Hardenbergia violacea

Ixodia achillaeoides ssp. alata

Leptospermum myrsinoides

Leucopogon parviflorus

Myoporum insulare

Olearia axillaris

Olearia ramulosa

Olearia rudis

Orthrosanthus multiflorus

Pomaderris halmaturina (riverine areas)

Pomaderris paniculosa

Rhagodia candolleana

common name

flame heath

pale turpentine bush

sticky cassinia

old mans beard

round-leaf correa

short-stem flax-lily

hop goodenia

desert hakea

limestone needlebush

native lilac

hills daisy

heath tea-tree

coastal bearded heath

common boobialla

coastal daisy

twiggy daisy-bush

azure daisy-bush

morning flag

Kangaroo Island pomaderris

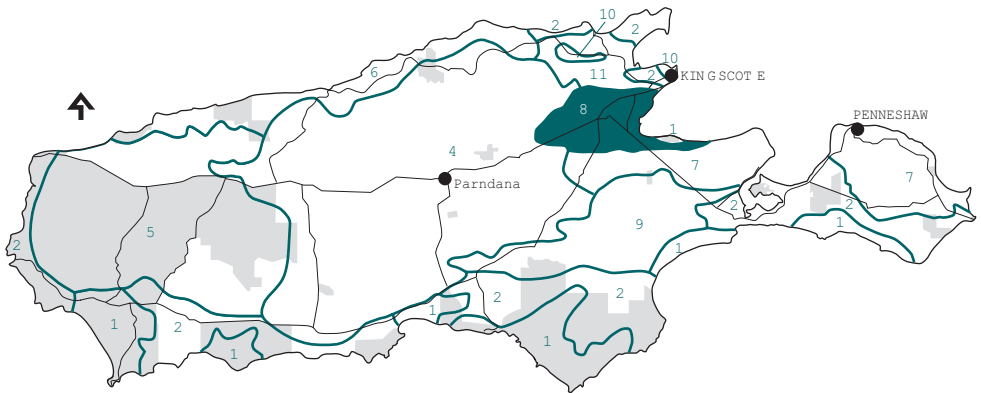
mallee pomaderris

seaberry saltbush



Subzone 8 – CYGNET PLAINS

Open forest and mallee bushland grading to the marine estuary.



This zone extends 12 km west from Brownlow to the Cygnet River then 10 km south westerly to the foot of the Seddon Plateau, and east to the coast at Red Banks.

Soils are predominantly alkaline sands or acidic sandy loam, overlying tight clays. Many areas are prone to winter waterlogging, and the whole area is the flood plain of the Cygnet River. Lunettes and salty areas are scattered throughout the area.

Rainfall varies from 450 mm in the north to 550 mm in the west.

The Cygnet River is the dominant watercourse in this subzone. Near the Cygnet River the vegetation is dominated by riverine open forest. Elsewhere mallee bushland dominates, grading into marine estuary. The three parts of the Cygnet Plains support differing native plant species. The species suited to each part of the subzone are shown in the tables.



Part 1

Species usually available from Trees For Life:

Species	common name	Riverine open forest	Mallee areas	Saline marine estuary
<i>Acacia cupularis</i>	coastal umbrella bush		<input type="checkbox"/>	<input type="checkbox"/>
<i>Acacia paradoxa</i>	kangaroo thorn		<input type="checkbox"/>	<input type="checkbox"/>
<i>Acacia pycnantha</i>	golden wattle	<input type="checkbox"/>		
<i>Acacia retinodes (swamp form)</i>	wirilda	<input type="checkbox"/>		
<i>Acacia triquetra</i>	mallee wreath wattle		<input type="checkbox"/>	
<i>Allocasuarina muelleriana</i>	slaty sheoak		<input type="checkbox"/>	
<i>Allocasuarina verticillata</i>	drooping sheoak	<input type="checkbox"/>		
<i>Callistemon rugulosus</i>	scarlet bottle-brush	<input type="checkbox"/>		
<i>Eucalyptus camaldulensis</i>	river red gum	<input type="checkbox"/>		
<i>Eucalyptus cladocalyx</i>	sugar gum	<input type="checkbox"/>		
<i>Eucalyptus cneorifolia</i>	K I narrow leaved mallee		<input type="checkbox"/>	
<i>Eucalyptus cosmophylla</i>	cup or swamp gum	<input type="checkbox"/>		
<i>Eucalyptus diversifolia</i>	coastal white mallee		<input type="checkbox"/>	
<i>Eucalyptus fasciculosa</i>	pink gum	<input type="checkbox"/>		
<i>Euc. lansdowneana albopurpurea</i>	Port Lincoln gum		<input type="checkbox"/>	
<i>Eucalyptus leucoxydon</i>	southern blue gum	<input type="checkbox"/>		
<i>Eucalyptus rugosa</i>	Kingscote mallee		<input type="checkbox"/>	
<i>Eucalyptus viminalis cygnetensis</i>	rough-barked manna gum	<input type="checkbox"/>		
<i>Leptospermum continentale</i>	prickly tea-tree	<input type="checkbox"/>		
<i>Melaleuca brevifolia</i>	short-leaf honey-myrtle			<input type="checkbox"/>
<i>Melaleuca gibbosa</i>	slender honey-myrtle	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Melaleuca halmaturorum</i>	SA swamp paperbark	<input type="checkbox"/>		<input type="checkbox"/>
<i>Melaleuca lanceolata</i>	dryland tea-tree	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Melaleuca uncinata</i>	broombush	<input type="checkbox"/>	<input type="checkbox"/>	



If you grow your own plants you can also order from the list below.

Species	common name	Riverine open forest	Mallee areas	Saline marine estuary
<i>Callitris gracilis (was preissii)</i>	cypress pine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Callitris rhomboidea</i>	Port Jackson pine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Xanthorrhoea semiplana tateana</i>	Tate's grass-tree	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 2

There are some other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

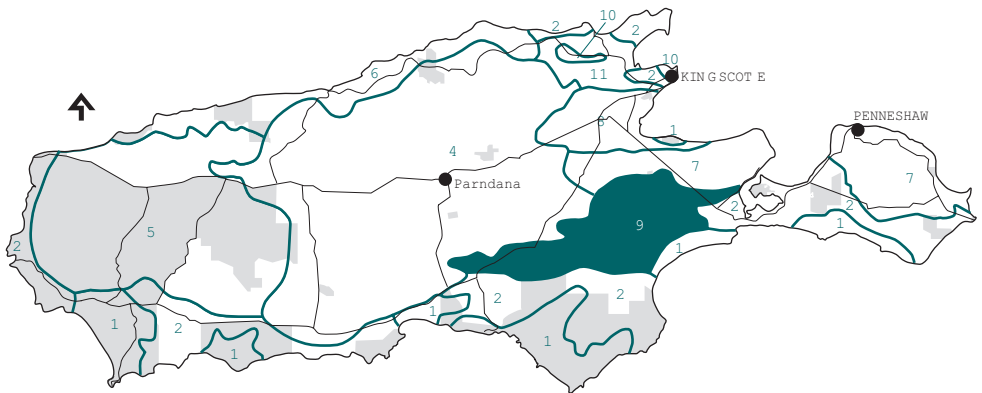
Species	common name	Riverine open forest	Mallee areas	Saline marine estuary
<i>Acacia farinosa</i>	mealy wattle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Calytrix glaberrima</i>	smooth heath-myrtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Calytrix tetragona</i>	common fringe myrtle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Clematis microphylla</i>	old mans beard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Correa reflexa var orbicularis</i> (syn <i>Correa reflexa var. reflexa</i>)	common correa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Dianella brevicaulis</i>	short-stem flax-lily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Enchylaena tomentosa</i>	ruby saltbush	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Goodenia ovata</i>	hop goodenia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Halosarcia pergranulata</i>	black-seed samphire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Juncus pallidus</i>	pale rush	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Lasiopetalum schulzenii</i>	drooping velvet bush	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Lepidosperma viscidum</i>	sticky sword sedge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Species continued	common name	Riverine open forest	Mallee areas	Saline marine estuary
<i>Leptospermum myrsinoides</i>	heath tea-tree	<input type="checkbox"/>		
<i>Myoporum insulare</i>	common boobialla		<input type="checkbox"/>	<input type="checkbox"/>
<i>Myoporum viscosum</i>	sticky boobialla	<input type="checkbox"/>		
<i>Olearia axillaris</i>	coastal daisy		<input type="checkbox"/>	
<i>Olearia microdisca</i>	small-flowered daisy-bush		<input type="checkbox"/>	
<i>Rhagodia candolleana</i>	seaberry saltbush		<input type="checkbox"/>	<input type="checkbox"/>
<i>Sarcocornia quinqueflora</i>	beaded samphire			<input type="checkbox"/>
<i>Suaeda australis</i>	austral seablite			<input type="checkbox"/>
<i>Threlkeldia diffusa</i>	coast bonefruit			<input type="checkbox"/>
<i>Thryptomene ericaea</i>	heath thryptomene		<input type="checkbox"/>	

Subzone 9 – McGILLIVRAY PLAIN

Mallee bushland



This zone starts near American River. It extends west for 22 km, then south west for 30 km to the Eleanor River then east to the south coast at D’Estrees Bay.

Soils are deep sands or sandy loam over tight clay. There are many interspersed swamp and lunette areas, and many salt lagoons, which receive drainage water from higher lands.

Rainfall varies from 450 mm in the southeast to 550 mm in the west. The saline Bugga Bugga creek drains to Wiadrowski’s lagoon in the eastern portion of this subzone. Timber Creek drains into the semi saline Murray’s Lagoon.

The vegetation is mallee bushland.

Part 1

Species usually available from Trees For Life:

Species

Acacia paradoxa

Acacia pycnantha

Acacia triquetra

Callistemon rugulosus

common name

kangaroo thorn

golden wattle

mallee wreath wattle

scarlet bottle-brush

Species continued

Dodonaea viscosa angustissima

common name

narrow leaved hop-bush

<i>Eucalyptus cneorifolia</i>	K I narrow leaved mallee
<i>Eucalyptus cosmophylla</i>	cup or swamp gum
<i>Eucalyptus diversifolia</i>	coastal white mallee
<i>Eucalyptus fasciculosa</i>	pink gum
<i>Eucalyptus lansdowneana albopurpurea</i>	Port Lincoln mallee
<i>Eucalyptus leptophylla</i>	narrow-leaved mallee
<i>Eucalyptus rugosa</i>	Kingscote mallee
<i>Melaleuca gibbosa</i>	slender honey-myrtle
<i>Melaleuca uncinata</i>	broombush

If you grow your own plants you can also order from the list below.

Species

Banksia marginata
Hakea rostrata
Xanthorrhoea semiplana tateana

common name

silver banksia
beaked hakea
Tate's grass-tree

Part 2

There are many other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Beyeria lechenaultii
Calytrix glaberrima
Calytrix tetragona
Correa reflexa var orbicularis
(syn Correa reflexa var. reflexa)
Dianella brevicaulis
Hakea muelleriana
Juncus pallidus
Myoporum brevipes
Orthrosanthus multiflorus
Thomasia petalocalyx
Thryptomene ericaea

common name

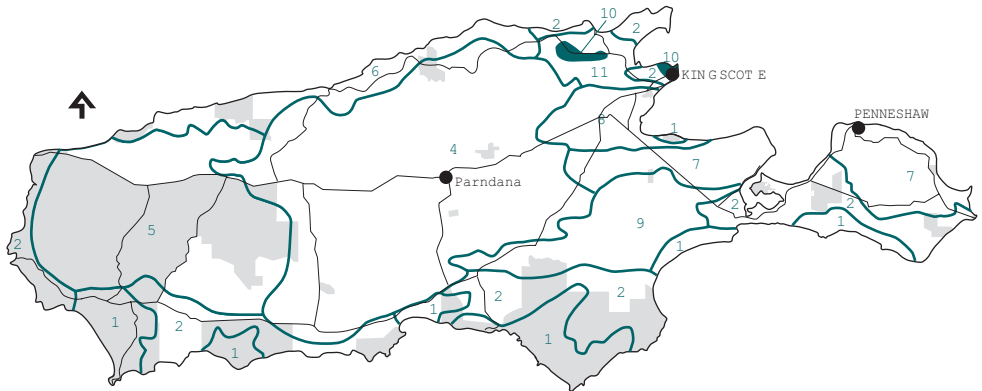
pale turpentine bush
smooth heath-myrtle
common fringe-myrtle
common correa

short-stem flax-lily
desert hakea
pale rush
a myoporum
morning flag
paper flower
heath thryptomene



Subzone 10 – WISANGER PLATEAU

Mallee bushland with sparse understorey, often containing rare to endangered plants.



Occupies small areas west of Emu Bay and another area adjacent to Kingscote.

Soils are mostly heavy brown cracking clays that are hard when dry and plastic when moist. There are some areas of lighter sandy loam. The pH is close to neutral.

Rainfall varies from 475 mm to 525 mm. All watercourses in this subzone are seasonal creeks.

The vegetation is mallee bushland.

Part 1

Species usually available from Trees For Life:

Species

Acacia cupularis

Acacia paradoxa

Allocasuarina verticillata

Dodonaea viscosa ssp. *angustissima*

Eucalyptus cladocalyx

common name

coastal umbrella bush

kangaroo thorn

drooping sheoak

narrow leaved hop-bush

sugar gum

Species continued

Eucalyptus diversifolia

common name

coastal white mallee



Eucalyptus lansdowneana ssp. *albopurpurea* Port Lincoln gum
Melaleuca uncinata broombush

Part 2

There are some other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Beyeria lechenaultii
Clematis microphylla
Correa reflexa var. *orbicularis*
(syn *Correa reflexa* var. *reflexa*)
Dianella brevicaulis
Enchylaena tomentosa
Eucalyptus odorata
Eucalyptus phenax (was 'anceps')
Myoporum insulare
Rhagodia candolleana

common name

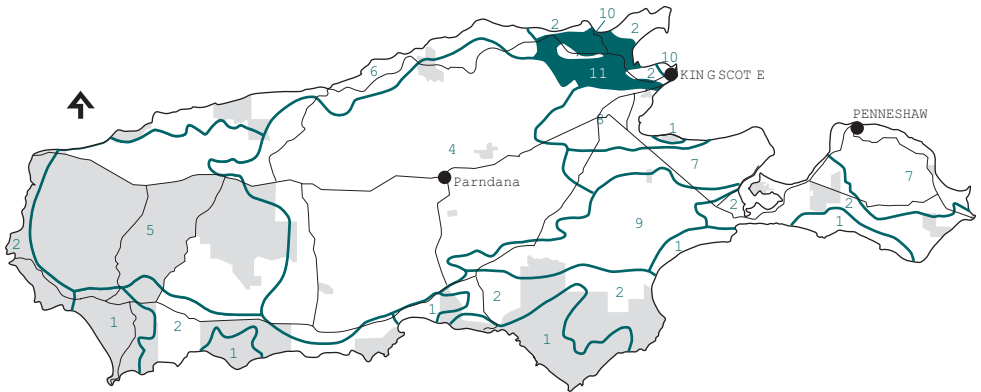
pale turpentine bush
old mans bead
common correa

short-stem flax-lily
ruby saltbush
peppermint box
cong mallee
common boobialla
seaberry saltbush



Subzone 11 – MENZIES HILLS

Kangaroo Island narrow-leaved mallee



This is a small area that surrounds the Wisanger plateau extending from the coast north west of Kingscote and from Emu Bay to Cygnet River and east to Brownlow.

Soils are mainly sand over clay. There are pockets of gilgais (heavy swelling clays that are hard and cracking when dry and plastic when moist), with areas of laterite in the subsurface layers. The soil is normally alkaline, and some areas are salty.

Rainfall varies from 475 mm to 525 mm. Watercourses are only minor creeks and seasonal drainage lines.

Vegetation is predominantly Kangaroo Island narrow-leaved mallee bushland

Part 1

Species usually available from Trees For Life:

Species

- Acacia cupularis*
- Acacia paradoxa*
- Callistemon rugulosus*
- Eucalyptus cneorifolia*
- Eucalyptus diversifolia*
- Eucalyptus lansdowneana albopurpurea*
- Melaleuca acuminata*

common name

- coastal umbrella bush
- kangaroo thorn
- scarlet bottle-brush
- K. I. narrow leaved mallee
- coastal white mallee
- Port Lincoln gum
- mallee honey-myrtle



<i>Melaleuca brevifolia</i>	short-leaf honey-myrtle
<i>Melaleuca uncinata</i>	broombush

If you grow your own plants you can also order from the list below.

Species	common name
<i>Callitris gracilis</i>	cypress pine
<i>Hakea rostrata</i>	beaked hakea
<i>Xanthorrhoea semiplana tateana</i>	Tate's grass-tree

Part 2

There are many other species in this subzone that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species	common name
<i>Beyeria lechenaultii</i>	pale turpentine bush
<i>Clematis microphylla</i>	old mans beard
<i>Correa backhousiana</i> var <i>insularis</i> (syn <i>Correa reflexa</i> var <i>nummulariifolia</i>)	round-leaf correa
<i>Correa reflexa</i> var <i>orbicularis</i> (syn <i>Correa reflexa</i> var. <i>reflexa</i>)	common correa
<i>Dianella brevicaulis</i>	short-stem flax-lily
<i>Dodonaea humilis</i>	dwarf hop-bush
<i>Eremophila glabra</i>	tar bush
<i>Eucalyptus odorata</i>	peppermint box
<i>Eucalyptus phenax</i> (was 'anceps')	cong mallee
<i>Eutaxia diffusa</i>	large-leaf eutaxia
<i>Grevillea ilicifolia</i>	holly leaf grevillea
<i>Hakea rugosa</i>	dwarf hakea
<i>Lasiopetalum baueri</i>	slender velvet-bush
<i>Lepidosperma viscidum</i>	sticky sword-sedge (not easy to propagate)
<i>Myoporum insulare</i>	common boobialla
<i>Olearia microdisca</i>	small flowered daisy-bush
<i>Orthrosanthus multiflorus</i>	morning flag
<i>Pittosporum phylliraeoides</i> var <i>microcarpa</i>	native apricot
<i>Rhagodia candolleana</i>	seaberry saltbush
<i>Thryptomene ericaea</i>	heath thryptomene



Subzone 12 – DRYLAND SALINITY AND OTHER SEMI-SALINE AREAS

To assist in rehabilitating areas that have active dryland salinity or emerging salt scalded areas it is recommended that a planting program commence to replace lost native vegetation by using local provenance species. Because dryland salinity is spread over the island, it is best to check the plant list for the subzone 1 to 11 in which the problem area lies.

One of the best ways to combat salinity is to put back deep rooted trees and shrubs that will use some of the water which has been going into the groundwater. It is often recommended to use non-local species to plant into saline areas, but there is evidence that some local species are quite salt tolerant when planting is done correctly.

Isolation

When starting rehabilitation of a salt affected area, the first step should be fencing the site off, or removing stock. It is best to leave the site like that for as long as possible before planting. This allows it to recover from grazing pressure, and often other plants (especially grasses) will establish themselves, saving you time and effort, and giving your revegetation a flying start.

Position

Begin planting the native trees and shrubs in the recharge area rather than directly into the salty scald. Here the plants will begin to use the excess water, and reduce the amount entering the groundwater. A good approach may be to start by direct seeding a 10 metre wide strip 30 metres above the salty area using seeds of mainly eucalypt and mallee species with larger shrubs. Tubestock of small mallee, large and small shrubs and ground covers can be planted from 5 to 20 metres above the salty area. In the immediate zone to 5 metres consider planting some of the marine estuary species listed below.

Part 1

Species usually available from Trees For Life:

Species

Acacia cupularis

Acacia paradoxa

Melaleuca brevifolia

Melaleuca halmaturorum

Melaleuca lanceolata

common name

coastal umbrella bush

kangaroo thorn

short-leaf honey-myrtle

S A swamp paperbark

dryland tea-tree

Part 2



There are some other species from marine estuary areas that are fairly easy to grow from seed or cuttings. You can order materials to grow plants from seed you have collected yourself.

Species

Atriplex cinerea

Carpobrotus rossii

Enchylaena tomentosa

Halosarcia pergranulata

Muehlenbeckia adpressa

Myoporum insulare

Rhagodia candolleana

Sarcocornia quinqueflora

Stipa stipoides

Suaeda australis

Threlkeldia diffusa

common name

coast saltbush

native pigface

ruby saltbush

black-seeded samphire

climbing lignum

common boobialla

seaberry saltbush

beaded samphire

prickly spear-grass

austral seablite

coast bonefruit

Woodlot and other Production Potential

It is possible to revegetate to combat a salinity problem and produce a financial crop. Woodlots are one type of profit making planting, and we offer some species which are suitable for this. There are also other crops such as fodder, saltbush, cut flowers and bush food. Before venturing into these long term crops, it is important to prepare a plan and to speak with local Primary Industries officers.



SPECIAL PURPOSE PLANTINGS

Many people starting a revegetation project want to establish a windbreak or plant out an area which is becoming saline. The following are some general guidelines about planting for particular purposes, incorporating local species.

It is important to remember to plant species most suitable for the area and soil type. Don't just plant one species, or the tallest species (eg river red gum) if it doesn't occur locally. Much greater success will be achieved if you use appropriate species.

Careful planning is important especially for Special Purpose Plantings. Please contact Trees For Life or your local Primary Industries Office for further advice.

For salinity area plantings, refer to Subzone 12.

Windbreaks

Windbreaks work by filtering and breaking the force of the wind. Permeable windbreaks which let some wind pass through are the most suitable. Ensure that understorey is planted to help maintain health of larger species.

Windbreaks must be semi-permeable

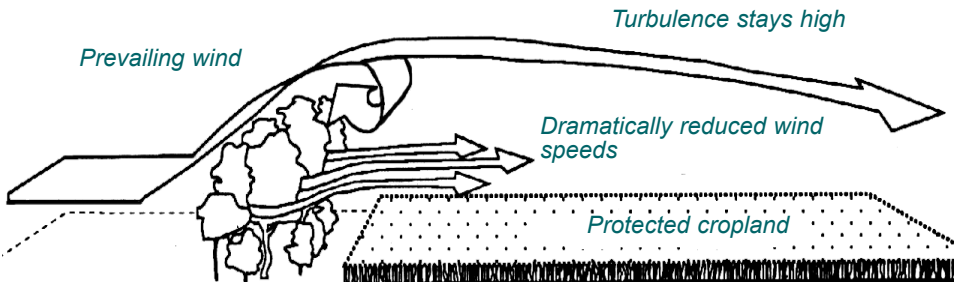


Figure 1: Windbreak design.

Position

For best results, plant windbreaks at right angles to the winds from which protection is needed. These are not necessarily the prevailing winds. Crops are generally worst affected by hot, drying winds from the north. Livestock are at greatest risk from cold winds and rain which often come from the south or south-west.



Height

The windbreak height determines the size of the sheltered area. The taller the windbreak, the greater the area it protects (see figure 2).

Wind direction

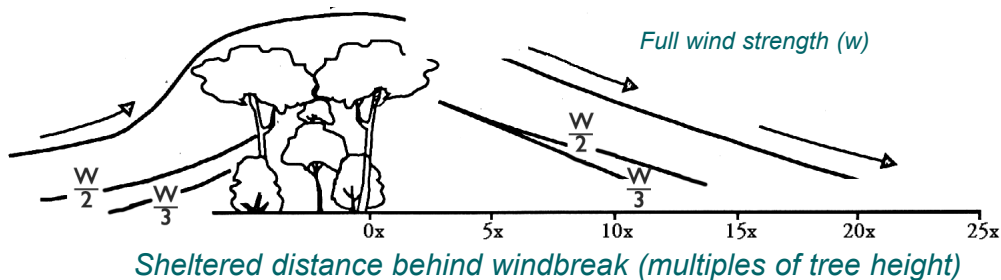


Figure 2: A properly designed windbreak provides shelter up to 25 times its height downwind and 5 times its height upwind.

Length

Windbreaks are most effective when they stretch without major gaps for distances exceeding 12 times the mature height of the trees. Thus, a windbreak 20m high should be not less than 240m long in an area of constant wind direction. If the windbreak is too short, wind is deflected around it leading to increased wind speeds at the ends.

Number of Rows

Windbreaks of three rows are effective for most farm situations, and are less affected by gaps caused by missing trees. Single row windbreaks should be avoided.

Tree Spacing

Distance between plants in windbreaks is based on local climate, soils and suitable plants, allowing access for weed control and maintenance. Understorey plants should be planted closer together than larger tree species, and there should be a much higher proportion of shrubs and groundcovers than trees.

Gaps

Gaps are required for gates and tracks; but because of the funnelling effect through the gaps, wind velocity in these areas can be substantially increased. This can be eliminated by angling the gap at about 45 degrees to the prevailing wind direction or by planting a few short trees or shrubs on either side of the gate or track.

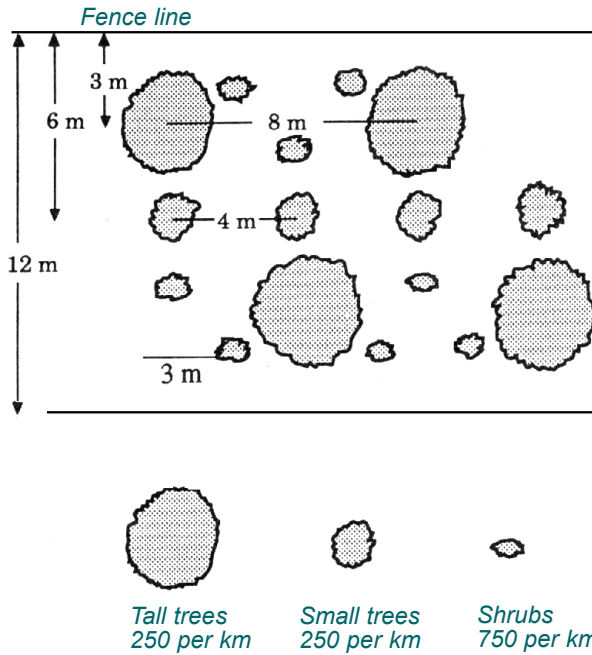


Figure 3: Recommended tree spacing for a three-row windbreak.



Figure 4: Angling the sides of the windbreak (top view).

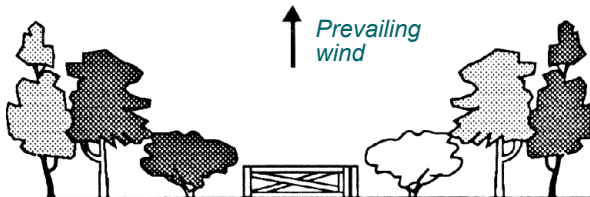


Figure 5: When gaps are needed, such as for gales, wind speed can be decreased by planting lower shrubs each side of the gap.



Other hints

Be creative : You can enhance biodiversity by correct design principles.

Link your project to others in the region, in your district and on your property.

Bigger areas are better for biodiversity than small areas. Shape is critical; block shaped or round areas are better than long narrow areas.

Plant back what once grew on the site, aiming to establish vegetation communities rather than mixed species. Ensure the community is from an area with the same physical properties (ie, soil, slope, climate, etc)

Have a look at the pamphlet 'Creative Revegetation; enhancing biodiversity by design' written by Greg Dalton of PIRSA.

Protection: keep windbreaks permanently fenced to prevent gaps being created by livestock and vermin browsing on the lower limbs of trees, and on shrubs or newly established seedlings.

Land capability: Consider the best location of windbreaks to match land capability boundaries and not necessarily along existing fencelines. For further advice contact local PIRSA officers.

Soil Erosion Control

There are many types of soil erosion, caused by wind and water. Lack of suitable cover to the soil in place can lead to sheet and rill erosion, mass movement, tunnel erosion and wind erosion.

It is important to select deep-rooted species and ground covers which will hold the soil together and in place. Plants such as *Dianella revoluta* which clump together and form a strong roots can help. Don't rely on single-stemmed larger trees. These can make the problems worse as and water can channel round them. Plant them with shrubs and groundcovers to avoid this.

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