

# PLANTING PALETTE EXTRACT



## STREETSCAPE WSUD RAINGARDEN & TREE PIT DESIGN PACKAGE

The Moreland City Council WSUD Planting Palette Extract is designed to help with the vegetation selection, planting design and vegetation maintenance of raingardens and tree pits. It can be used as a stand-alone guide or as part of the Moreland City Council Streetscape WSUD Raingarden and Tree Pit Design Package.

The original planting palette was part of the WSUD raingarden and tree pit design package produced in 2013. The current version has been updated by Moreland City Council in July 2015. The updates include an additional six pages of suitable species for bioretention filter systems, a maintenance report for the vegetation, suggested groupings of species and an example of a landscape planting plan and plant schedule.

The planting palette can be used and reproduced freely, however some images retain their original copyright (see adjacent table).



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**Images from the University of Melbourne Burnley Plant Guide ([www.bpg.unimelb.edu.au](http://www.bpg.unimelb.edu.au)). All images, unless otherwise indicated are ©University of Melbourne:**

- *Banksia marginata*
- *Callistemon* 'Little John'
- *Chrysocephalum semipapposum*
- *Convolvulus sabatius*
- *Dianella longifolia*
- *Dodonea viscosa*
- *Eucalyptus macrocarpa*
- *Fraxinus velutina*
- *Ginkgo biloba*
- *Goodenia ovata*
- *Hardenbergia Violacea* (© Scott Watson)
- *Kleinia mandraliscae*
- *Limonium perezii*
- *Melaleuca incana*
- *Melaleuca thymifolia*
- *Poa poiiformis*
- *Sedum* 'Autumn Joy'
- *Tulbaghia violacea*

### 3.8 Planting Options

#### Planting in Bioretention Filter Media

Planting of a raingarden system has three important benefits; water quality, visual amenity and habitat provision. Planting within the bioretention filter media should comprise primarily of plants that have been demonstrated to be effective for removal of nutrients as recommended in Stormwater Biofiltration Systems Adoption Guidelines<sup>1</sup>. Additional secondary accent feature planting can be included to improve the aesthetic of the raingarden. Secondary species can be selected for foliage, flowering or colour to give the designer the opportunity to express a pattern offering the flexibility to express complimentary texture or colour. Species selection should also consider micro-climates and conditions specific to each individual project. Examples of typical planting arrangements using primary and secondary species are suggested. These examples are not intended to be prescriptive and the design should be developed on an individual project basis.

Information on the suggested species list for bioretention filter media is provided in the Planting Palette section.

Install size of plants will be dependent on the project budget and the importance of initial impact. Plant establishment is quicker with smaller plants. Typically install size is either tubestock or 150mm pots for groundcovers and shrubs and a minimum of 45 litre pot for trees. Planting density should be high (at least 10 plants/m<sup>2</sup> for sedges, rushes and grasses). This increases root density and reduced potential for weed invasion.

Where indigenous species are used plants should be of local provenance.

Note this list provides a basis for species selection and is not intended to be exhaustive or exclusive. Particular projects may have other considerations that influence species selection including local character. Plants within the filter media should however be able to adapt to the conditions of the biofiltration system and have the same attributes as the suggested species.

Plants should be tolerant of the following conditions:

- Free draining coarse textured soils
- Periodic flooding
- Extended dry periods

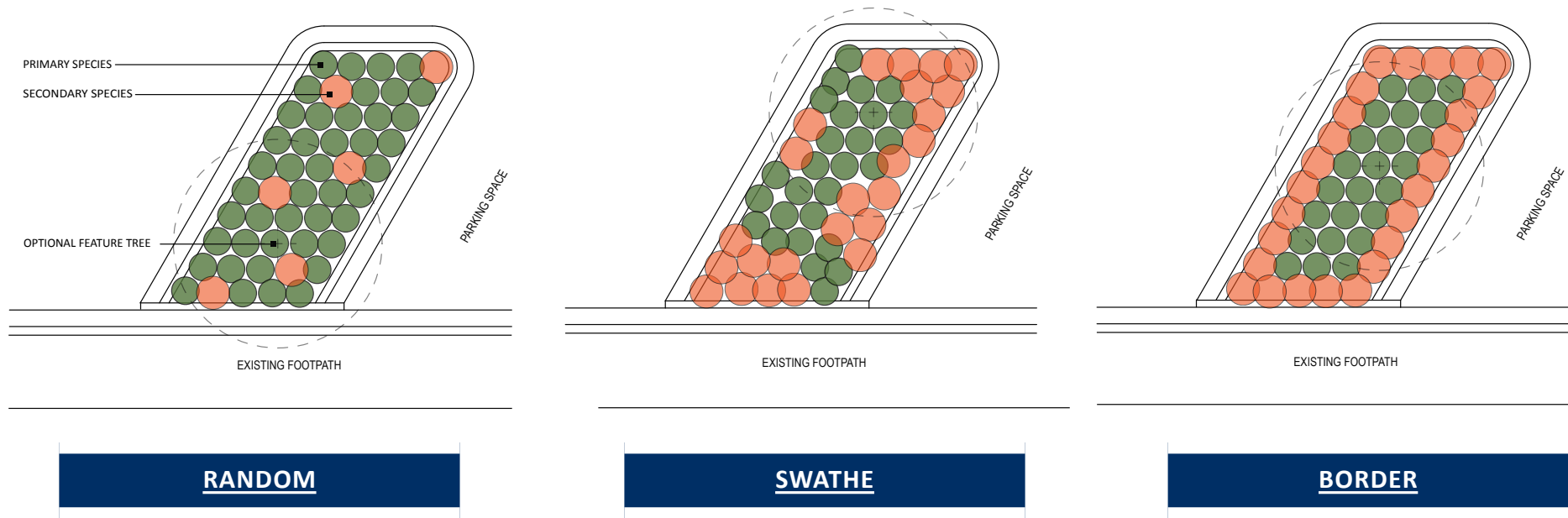
Desirable plant attributes include:

- High growth rate
- High root density
- High total root, leaf and shoot biomass
- High root:shoot ratio
- High leaf area ratio
- High length of longest root

<sup>1</sup> *Adoption Guidelines for Stormwater Biofiltration Systems*. 2015. Cooperative Research Centre for Water Sensitive Cities, Monash University, Melbourne

PRIMARY	SECONDARY	TREES
<p>Primary Species should comprise at least 50% of total plant cover</p> <ul style="list-style-type: none"> <li>• <i>Carex appressa</i></li> <li>• <i>Ficinia nodosa</i></li> <li>• <i>Goodenia ovata</i></li> <li>• <i>Juncus amabilis</i></li> <li>• <i>Juncus flavidus</i></li> <li>• <i>Juncus pallidus</i></li> <li>• <i>Poa poiformis</i></li> <li>• <i>Themeda triandra</i></li> </ul> <p>Even for a small biofilter system at least three plant species should be chosen. Planting a mix of species, rather than selecting only one or two species, will provide greater visual amenity and greater habitat diversity as well as making the system more resilient to climatic variation.</p>	<ul style="list-style-type: none"> <li>• <i>Anigozanthus species</i></li> <li>• <i>Brachyscome multifida</i></li> <li>• <i>Callistemon</i> 'Little John'</li> <li>• <i>Carpobrotus modestus</i></li> <li>• <i>Chrysocephalum semipapposum</i></li> <li>• <i>Convolvulus sabatius</i></li> <li>• <i>Correa alba</i></li> <li>• <i>Correa</i> 'Dusky Bells'</li> <li>• <i>Dianella longifolia</i></li> <li>• <i>Dianella revoluta</i></li> <li>• <i>Dodonea viscosa</i></li> <li>• <i>Eucalyptus macrocarpa</i></li> <li>• <i>Hardenbergia violacea</i></li> <li>• <i>Kleinia mandraliscae</i></li> <li>• <i>Kniphofia</i> 'Winter Cheer'</li> <li>• <i>Limonium perezii</i></li> <li>• <i>Lomandra longifolia</i></li> <li>• <i>Melaleuca incana</i></li> <li>• <i>Melaleuca thymifolia</i></li> <li>• <i>Myoporum parvifolium</i></li> <li>• <i>Phormium tenax</i></li> <li>• <i>Salvia canariensis</i></li> <li>• <i>Sedum</i> 'Autumn Joy'</li> <li>• <i>Tulbaghia violacea</i></li> <li>• <i>Veronica perfoliata</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Banksia species</i></li> <li>• <i>Brachychiton acerifolius</i></li> <li>• <i>Callistemon viminalis</i></li> <li>• <i>Callistemon salignus</i></li> <li>• <i>Callistemon sieberi</i></li> <li>• <i>Elaeocarpus reticulatus</i></li> <li>• <i>Ficus microcarpa</i></li> <li>• <i>Fraxinus velutina</i></li> <li>• <i>Ginkgo biloba</i></li> <li>• <i>Lagerstroemia cultivars</i></li> <li>• <i>Lophostemon confertus</i></li> <li>• <i>Maclura pomifera</i> 'Witchita'</li> <li>• <i>Pyrus calleryana</i></li> <li>• <i>Tristanopsis laurina</i></li> <li>• <i>Ulmus parvifolia</i></li> </ul>

## Typical Planting Arrangements





## Edge Planting

### EDGE PLANTING



#### DESCRIPTION

Complementary edge planting can be included in stepped edges or any landscaped areas immediately abutting the raingarden. A thin strip of edge planting can form a useful barrier and visual cue to stop pedestrians from straying into the raingarden.

Larger install size should be considered for edge planting to form an immediate barrier and visual cue for pedestrians.

#### SUGGESTED SPECIES

- *Anigozanthus* species
- *Brachyscome multifida*
- *Callistemon* species
- *Carpobrotus modestus*
- *Ficinia nodosa*
- *Chrysocephalum semipapposum*
- *Dianella longifolia*
- *Dianella revoluta*
- *Dianella* species
- *Hardenbergia violacea*
- *Iris germanica*
- *Lomandra* species
- *Myoporum parvifolium*
- *Patersonia occidentalis*

### FEATURE TREES











Small trees can be included in the adjacent planting, within biofiltration tree pits or in some circumstances within raingardens themselves to add an extra dimension of vegetation or help tie the raingarden into the surrounding landscape character.



- *Callistemon viminalis*,
- *Callistemon salignus*
- *Callistemon sieberi*
- *Lagerstroemia* cultivars
- *Lophostemon confertus*
- *Pyrus calleryana*
- *Ginkgo biloba*
- *Maclura pomifera* 'Witchita'
- *Platanus orientalis*
- *Platanus x acerifolia*
- *Brachychiton acerifolius*

### 3.9 Planting Palette

The following planting palette is a suggested list of plants suitable for use in bioretention filter media with planting composition done in accordance with Section 3.8. This list provides a basis for species selection and is not intended to be exhaustive or exclusive.

		CAREX APPRESSA	FICINIA NODOSA	JUNCUS AMABILIS	JUNCUS FLAVIDUS
PRIMARY SPECIES	IMAGE				
	DETAILS	<b>Common Name:</b> Tall Sedge <b>Size at maturity (HXW):</b> 1.5-1.2 x 0.5-1m <b>Recommended density:</b> 10/m <sup>2</sup>	<b>Common Name:</b> Knobby Club Rush <b>Size at maturity (HXW) :</b> 0.5 -1 x 0.5 -1m <b>Recommended density:</b> 10/m <sup>2</sup>	<b>Common Name:</b> Hollow Rush <b>Size at maturity (HXW) :</b> 0.2 - 1.2 x 0.2 - 0.5m <b>Recommended density:</b> 10/m <sup>2</sup>	<b>Common Name:</b> Juncus <b>Size at maturity (HXW):</b> 0.04-0.12 x 0.04-0.1m <b>Recommended density:</b> 10/m <sup>2</sup>
	COMMENTS	<p>Grows well in wet soils along margins of water areas in full sun/ semi shade. Will tolerate some drying out and frost. Flowers in spring and summer. Has performed well in raingardens in Moreland (eg. Mutton Reserve).</p> <p>Low maintenance. Indigenous.</p>	<p>Grows in a range of conditions and soil types, in full sun to part-shade. Fast growing. Flowers year round. Has had great success in all raingardens in Moreland.</p> <p>Low maintenance. Indigenous.</p>	<p>Grows in a range of conditions and soil types, in full sun to part-shade.</p> <p>Low maintenance. Indigenous.</p>	<p>Tolerant of most soil conditions, including wet areas and swampy soil. Tolerant of frost.</p> <p>Low maintenance. Indigenous.</p>

PRIMARY SPECIES		THEMEDA TRIANDRA	POA POIFORMIS	JUNCUS PALLIDUS	GOODENIA OVATA
PRIMARY SPECIES	IMAGE				
	DETAILS	<p><b>Common Name:</b> Kangaroo Grass</p> <p><b>Size at maturity (HXW):</b> 0.3 x 0.4 m</p> <p><b>Recommended density:</b> 10/ m<sup>2</sup></p>	<p><b>Common Name:</b> Coastal Tussock Grass</p> <p><b>Size at maturity (HXW):</b> 1.0 x 1.0 m</p> <p><b>Recommended density:</b> 10/ m<sup>2</sup></p>	<p><b>Common Name:</b> Sea Rush</p> <p><b>Size at maturity (HXW):</b> 1-2 m x 0.6-1 m</p> <p><b>Recommended density:</b> 10/ m<sup>2</sup></p>	<p><b>Common Name:</b> Hop Goodenia</p> <p><b>Size at maturity (HXW):</b> 1 x 1.5 m</p> <p><b>Recommended density:</b> 8-10/m<sup>2</sup></p>
	COMMENTS	<p>Can be cut back in winter/ early spring. Moderately drought and waterlogging tolerant. Flowers spring to summer.</p> <p>Low maintenance. Indigenous.</p>	<p>Moderately drought tolerant species that prefers well drained soils. Is effective in removing nitrogen in dry conditions. Has attractive blue green foliage, flowers in summer.</p> <p>Low maintenance. Indigenous.</p>	<p>Suitable for raingardens that have longer periods of waterlogging and on the edges of wetlands. Flowers in summer. Performs well near water inlets in raingardens in Moreland (ie. Mutton Reserve).</p> <p>Low maintenance. Indigenous.</p>	<p>Fast growing but short lived. Has a long flowering season (late winter to autumn). Drought, cold and waterlogging tolerant.</p> <p>Low maintenance. Indigenous.</p>

SECONDARY SPECIES		ANIGOZANTHOS SPECIES	CARPOBROTUS MODESTUS	DIANELLA LONGIFOLIA	DIANELLA REVOLUTA
IMAGE	DETAILS				
		<b>Common Name:</b> Kangaroo Paw <b>Size at maturity (HXW):</b> 0.5-1.2 x 0.5-0.8m <b>Recommended density:</b> 6/m <sup>2</sup>	<b>Common Name:</b> Pig Face <b>Size at maturity (HXW) :</b> 0.2 x 1m <b>Recommended density:</b> 5/m <sup>2</sup>	<b>Common Name:</b> Smooth Flax Lily <b>Size at maturity (HXW):</b> 0.5-1 x 1m <b>Recommended density:</b> 8/m <sup>2</sup>	<b>Common Name:</b> Blue Flax Lily <b>Size at maturity (HXW):</b> 0.6 x 0.5m <b>Recommended density:</b> 8/m <sup>2</sup>
		<p>Grows best in well-drained soils in a sunny position. Kangaroo paws are relatively short-lived plants. Some species do not tolerate frost. Flowers winter to summer.</p> <p>Moderate maintenance. Native.</p>	<p>Grows in a range of conditions and soil types, in full sun to part-shade. Fast growing, flowers in spring and summer. Has performed well in raingardens in Moreland (eg. Sewell Reserve)</p> <p>Low maintenance. Indigenous.</p>	<p>Grows in most soil conditions in full sun or part shade. Fast growing, hardy and drought tolerant. Flowers spring to autumn.</p> <p>Low maintenance. Indigenous.</p>	<p>Grows in most free draining soils, in full sun to part-shade. Tolerates drought and frost. Flowers spring to summer. Has performed well in raingardens in Moreland (eg. Mutton Reserve).</p> <p>Low maintenance. Indigenous.</p>



## SECONDARY SPECIES

	IMAGE		<u>DODONEA VISCOSA</u>	<u>LOMANDRA LONGIFOLIA</u>	<u>MYOPORUM PARVIFOLIUM</u>	<u>EUCALYPTUS MACROCARPA</u>
						
			<p><b>Common Name:</b> Sticky Hop Bush</p> <p><b>Size at maturity (HXW):</b> 1-3 x 1-3 m m</p> <p><b>Recommended density:</b> 1/m<sup>2</sup></p>	<p><b>Common Name:</b> Spiny Head Mat Rush</p> <p><b>Size at maturity (HXW) :</b> 1-2 x 1-2m</p> <p><b>Recommended density:</b> 10/m<sup>2</sup></p>	<p><b>Common Name:</b> Creeping Boobialla</p> <p><b>Size at maturity (HXW):</b> 0.2 x 1.5-5m</p> <p><b>Recommended density:</b> 2/m<sup>2</sup></p>	<p><b>Common Name:</b> Mottlecah</p> <p><b>Size at maturity (HXW):</b> 2-3 x 2-3 m</p> <p><b>Recommended density:</b> 1/m<sup>2</sup></p>
			<p>Drought tolerant indigenous shrub. Requires annual clipping to maintain density and size. Can grow in semishade.</p> <p>Moderate maintenance. Indigenous.</p>	<p>Grows in full sun and part-shade. Grows well in both coastal and inland conditions. Flowers spring to summer. Has performed well in raingardens in Moreland. Lomandra filiformis can be used when a smaller plant is required.</p> <p>Low maintenance. Indigenous.</p>	<p>Grows in a variety of soil types in full sun to part shade. It will tolerate moderate drought and frost. Flowers autumn to early summer. Has performed well in raingardens in Moreland (eg. Mutton Reserve). Small leaved forms are faster growing but may be shorter lived.</p> <p>Low maintenance. Indigenous.</p>	<p>Needs well drained soils. Can be coppiced to produce multiple stems. Flowers spring to early summer. This is a tall growing shrub/small tree, ensure that it does not block line-of-sight for traffic.</p> <p>Moderate maintenance. Native.</p>

## SECONDARY SPECIES

IMAGE

DETAILS

COMMENTS

### HARDENBERGIA VIOLACEA



**Common Name:**  
Hardenbergia, Native  
Sarsparilla  
**Size at maturity (HXW):**  
0.5 x 0.5 m  
**Recommended density:**  
4-6/ m<sup>2</sup>

Use a clumping groundcover form such as 'Mini Ha-ha' or Meema. Prefers full sun but is shade tolerant. Also tolerates drought and waterlogging. Has purple flowers in mid-winter and spring.  
  
Low maintenance.  
Indigenous.

### VERONICA PERFOLIATA



**Common Name:**  
Diggers Speedwell  
**Size at maturity (HXW):**  
0.8 x 1 m  
**Recommended density:**  
8-10/ m<sup>2</sup>

Moderately drought and waterlogging tolerant. Flowers in spring.  
  
Low maintenance.  
Indigenous.

### LIMONIUM PEREZII



**Common Name:**  
Perennial Statice  
**Size at maturity (HXW):**  
0.6 x 0.7 m  
**Recommended density:**  
8-10/ m<sup>2</sup>

Very drought and heat tolerant. Needs well-drained soils. Flowers can remain on the plant for some time to provide extended display. Flowers late spring to early summer.  
  
Low maintenance.  
Exotic.

### TULBAGHIA VIOLACEA



**Common Name:**  
Society Garlic  
**Size at maturity (HXW):**  
0.3 x 0.6 m  
**Recommended density:**  
8-10/ m<sup>2</sup>

Can tolerate moderate drought and heavy clay soils. Needs full sun for flowering. Flowers in spring and autumn.  
  
Low maintenance.  
Exotic.

## SECONDARY SPECIES

### IMAGE

### DETAILS

### COMMENTS

#### PHORMIUM TENAX



**Common Name:**

New Zealand Flax

**Size at maturity (HXW):**

2 m x 1.5 m

**Recommended density:**

4/ m<sup>2</sup>

Once established can tolerate long periods without water. Can also be used around the edge of water features. Flowers late spring and early summer. Use dwarf cultivars where height is an issue.

Low maintenance.  
Exotic.

#### KLEINIA MANDRALISCAE



**Common Name:**

Bleu Chalksticks

**Size at maturity (HXW):**

0.45 x 0.75 m

**Recommended density:**

8-10/ m<sup>2</sup>

Very drought tolerant. Best in full sun but can tolerate some shade. This plant is grown for its attractive leaves rather than the flowers.

Low maintenance.  
Exotic.

#### KNIPHOFIA 'WINTER CHEER'



**Common Name:**

Red Hot Pokers

**Size at maturity (HXW):**

1 x 0.6 m

**Recommended density:**

6-8/ m<sup>2</sup>

Does best in moist soils in full sun but will tolerate some drought and shade. Flowers in winter. Has performed well in raingardens in Moreland (eg. Mutton Reserve).

Moderate maintenance.  
Exotic.

#### SALVIA CANARIENSIS



**Common Name:**

Canary Island Sage

**Size at maturity (HXW):**

1.5 x 2 m

**Recommended density:**

3-4 / m<sup>2</sup>

Prefers a sunny open site with well drained soils. Moderately drought tolerant. Flowering occurs in late spring to early summer.

Moderate maintenance.  
Exotic.



## SECONDARY SPECIES

### IMAGE

#### CALLISTEMON 'LITTLE JOHN'



#### CORREA 'DUSKY BELLS'



#### MELALEUCA INCANA



#### MELALEUCA THYMIFOLIA



### DETAILS

##### Common Name:

Little John

##### Size at maturity (HXW):

1.2 x 1-2 m

##### Recommended density:

1-2 / m<sup>2</sup>

##### Common Name:

Dusky Bells

##### Size at maturity (HXW):

0.45 x 2 m

##### Recommended density:

2-3 / m<sup>2</sup>

##### Common Name:

Grey Honey-myrtle

##### Size at maturity (HXW):

2 x 2m

##### Recommended density:

1 / m<sup>2</sup>

##### Common Name:

Thyme-leaf Honey-myrtle

##### Size at maturity (HXW):

1 x 0.5 m

##### Recommended density:

2 / m<sup>2</sup>

### COMMENTS

Will grow in semishade to full sun. Moderately drought tolerant. Flowers in spring and early summer.

Low maintenance.  
Native.

Drought tolerant small shrub that grows well in shade and sun. Flowers in autumn and winter.

Low maintenance.  
Native.


Tolerates saline soils. Needs annual pruning to rejuvenate. Very drought and waterlogging tolerant. Flowers spring and early summer. Should only be planted where there is sufficient space.






Moderate maintenance.  
Native.

Grows best with regular moisture. Regular pruning will maintain density. Flowers late winter to early summer.

Moderate maintenance.  
Native.



SECONDARY SPECIES		CHRYSOCEPHALUM SEMIPAPPOSUM	SEDUM 'AUTUMN JOY'	CORREA ALBA	CONVOLVULUS SABATIUS
IMAGE					
DETAILS		<p><b>Common Name:</b> Clustered Everlasting</p> <p><b>Size at maturity (HXW):</b> 0.5 x 0.3 m</p> <p><b>Recommended density:</b> 6-8 / m<sup>2</sup></p>	<p><b>Common Name:</b> Ice Plant</p> <p><b>Size at maturity (HXW):</b> 0.6 x 0.6 m</p> <p><b>Recommended density:</b> 6-8/ m<sup>2</sup></p>	<p><b>Common Name:</b> Coastal Correa</p> <p><b>Size at maturity (HXW):</b> 1.5 x 1.5 m</p> <p><b>Recommended density:</b> 1/m<sup>2</sup></p>	<p><b>Common Name:</b> Convolvulus</p> <p><b>Size at maturity (HXW):</b> 0.1 x 2 m</p> <p><b>Recommended density:</b> 6/ m<sup>2</sup></p>
COMMENTS		<p>Prefers full sun. Drought tolerant but benefits from additional water in dry summers. Flowers in spring and summer.</p> <p>Moderate maintenance. Indigenous.</p>	<p>Flowers best in full sun. Flower heads can be left on the plant for some time. Moderately drought tolerant. Flowers in autumn.</p> <p>Moderate maintenance. Exotic.</p>	<p>Drought tolerant species that prefers free draining soils. Has woody roots so should help maintain infiltration capacity. Flowers for most of the year.</p> <p>Low maintenance. Indigenous.</p>	<p>Very drought tolerant. Will tolerate light shade but prefers full sun. Flowers from spring to autumn.</p> <p>Low maintenance. Exotic.</p>

		BANKSIA <u>MARGINATA</u>	CALLISTEMON <u>VIMINALIS</u>	CALLISTEMON <u>SALIGNUS</u>	EUCALYPTUS <u>LEUCOXYLON</u>	LAGERSTROEMIA <u>CULTIVARS</u>
<u>TREES</u>	<u>IMAGE</u>					
	<u>DETAILS</u>	<p><b>Common Name:</b> Silver Banksia</p> <p><b>Size at maturity (HXW):</b> 4-6 x 3-5m</p>	<p><b>Common Name:</b> Red Bottlebrush</p> <p><b>Size at maturity (HXW):</b> 6-8 x 4-6m</p>	<p><b>Common Name:</b> Willow Bottle Brush</p> <p><b>Size at maturity (HXW) :</b> 6-8 x 4-5m</p>	<p><b>Common Name:</b> Yellow gum</p> <p><b>Size at maturity (HXW):</b> 8-12 x 5-7m</p>	<p><b>Size at maturity (HXW):</b> 4-6 x 3-5m</p>
	<u>COMMENTS</u>	<p>Woody, evergreen plants ranging from round shrubs to tall trees. Select stock that has been pruned to a single dominant stem. Prefers low phosphorus conditions..</p> <p>Indigenous.</p>	<p>Optimal conditions are in moist well-drained soils in full - partial sun. It will grow in heavy waterlogged soils but is susceptible to frost damage.</p> <p>Native.</p>	<p>Grows well in most soil types, in full sun or part-shade. Moderate drought tolerance and high tolerance of water logging and therefore tolerates periods of inundation.</p> <p>Native.</p>	<p>Can grow with some coastal and saline conditions and irregular waterlogging.Has performed well in raingardens in Moreland (eg. Anderson Road, Fawkner).</p> <p>Indigenous.</p>	<p>Grows well in moist, slightly acidic soils in full sun.</p> <p>Exotic.</p>

# TREES

## IMAGE

## DETAILS

## COMMENTS

### LOPHOSTEMON CONFERTUS



**Common Name:**  
Brush Box  
**Size at maturity (HXW) :**  
15 x 8m

Prefers sandy soils and full sun- part shade. Drought and frost tolerant. Has performed well in raingardens in Moreland (eg. Snell Grove, Oak Park).  
Native.

### PYRUS CALLERYANA



**Common Name:**  
Callery Pear  
**Size at maturity (HXW):**  
8-12 x 5-7m

Not drought tolerant. Can be used in narrow sites. Has performed well in raingardens in Moreland (eg. Anderson Road, Fawkner).  
Exotic.

### GINKGO BILOBA



**Common Name:**  
Ginkgo  
**Size at maturity (HXW) :**  
5-20 x 8 m

Use only male trees as female trees produce foul smelling fruit. Tolerates pollution and is moderately drought and waterlogging tolerant.  
Exotic.

### MACLURA POMIFERA 'WITCHITA'



**Common Name:**  
Wichita Osage Orange  
**Size at maturity (HXW):**  
12 -20 x 10-15m

Adapts to most soils, prefers full sun and has tolerance to a range of difficult site conditions after irrigation during establishment.  
Exotic.






### BRACHYCHITON ACERIFOLIUS



**Common Name:**  
Illawarra Flame Tree  
**Size at maturity (HXW):**  
15-20 x 10-15m

Will grow in most soils and prefers sunny position. Tolerant of dry conditions but can be sensitive to frost.  
Native.



TREES		TRISTANIOPSIS LAURINA	ULMUS PARVIFOLIA	ELAEOCARPUS RETICULATUS	FICUS MICROCARPA	FRAXINUS VELUTINA 'MODESTO'
	IMAGE					
	DETAILS	<b>Common Name:</b> Kanooka, Water Gum <b>Size at maturity (HXW):</b> 5-20 x 5 m	<b>Common Name:</b> Chinese Elm <b>Size at maturity (HXW):</b> 8-12 x 8-15 m	<b>Common Name:</b> Blueberry Ash <b>Size at maturity (HXW):</b> 10-15 x 4-5 m	<b>Common Name:</b> Hill's Weeping Fig <b>Size at maturity (HXW):</b> 8-20 x 5-15 m	<b>Common Name:</b> Velvet Ash <b>Size at maturity (HXW):</b> 9- 20 x 9-12 m
	COMMENTS	Good in semishade to full sun. Tolerates moderate drought. Slow growing when young. Has performed well in raingardens in Moreland (eg. Major Road).  Native.	Resistant to Elm Leaf Beetle. Should be formatively pruned when young to prevent branch shedding in old trees. Has performed well in tree pits in Moreland (eg. Major Road).  Exotic.	Shade tolerant tree that does best with moist soils.  Native.	Commonly used street tree in Moreland. Can be clipped. Tolerates drought and waterlogging and can grow in semishade to full sun. Looks best in an avenue.  Native.	Suited to larger areas as the tree grows quite large. Formative pruning is required when young to attain good form. Deciduous and shade providing in summer. Use cultivar 'Modesto' as this is a male clone and so is not invasive.  Exotic.



## SUGGESTED PLANTING GROUPS

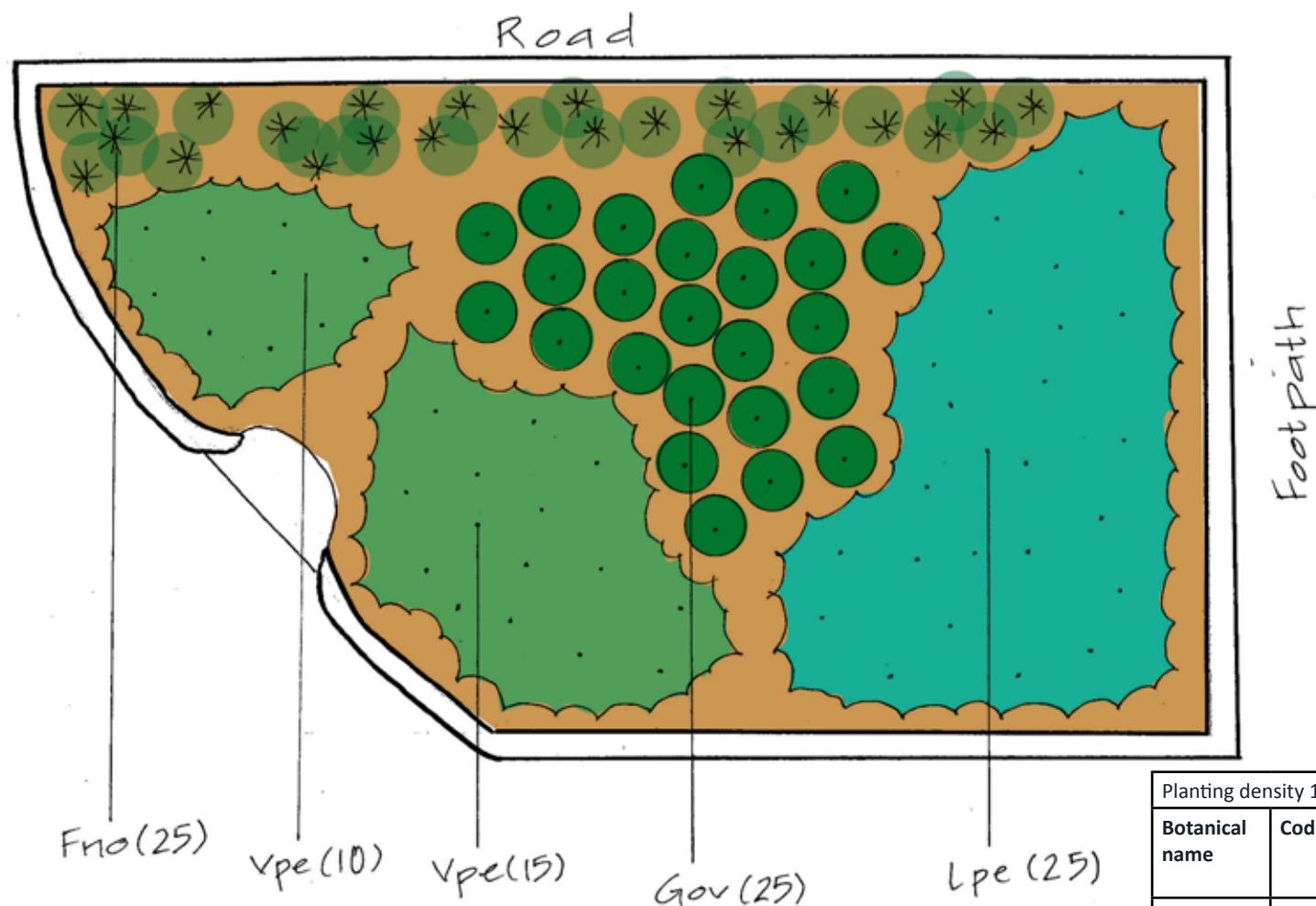
INDIGENOUS	<p>Low maintenance indigenous plant composition. To increase habitat diversity, a mix of plant forms (shrubs, grasses, herbs) should be used.</p> <p><b>Suggested group:</b></p> <ul style="list-style-type: none"> <li>• 20% <i>Correa alba</i></li> <li>• 16% <i>Goodenia ovata</i></li> <li>• 16% <i>Poa poiiformis</i></li> <li>• 16% <i>Ficinia nodosa</i></li> <li>• 16% <i>Themeda triandra</i></li> <li>• 16% <i>Hardenbergia violacea</i></li> </ul>	ACTIVITY CENTRES	<p>Up to 50% moderate maintenance and the remaining 50% primary species</p> <p><b>Suggested group:</b></p> <ul style="list-style-type: none"> <li>• 20% <i>Anigozanthos cultivar</i></li> <li>• 20% <i>Chrysocephalum semipapposum</i></li> <li>• 15% <i>Poa poiiformis</i></li> <li>• 20% <i>Ficinia nodosa</i></li> <li>• 15% <i>Themeda triandra</i></li> <li>• 10% <i>Dianella revoluta</i></li> </ul> <p>The suggested species are all native.</p>
PUBLIC SPACE	<p>Mix of low and moderate maintenance species:</p> <p>Up to 25% moderate maintenance plants and at least 50% primary species</p> <p>The remaining plants made up of low maintenance secondary species.</p> <p><b>Suggested group:</b></p> <ul style="list-style-type: none"> <li>• 25% <i>Goodenia ovata</i></li> <li>• 25% <i>Ficinia nodosa</i></li> <li>• 10% <i>Anigozanthos cultivar</i></li> <li>• 15% <i>Kniphofia 'Winter Cheer'</i></li> <li>• 15% <i>Limonium perezii</i></li> <li>• 10% <i>Veronica perfoliata</i></li> </ul>	RESIDENTIAL	<p>Low maintenance plants that have visual appeal:</p> <p>50% primary species</p> <p>50% low maintenance species that have display features (attractive flowers or contrasting leaf colours)</p> <p><b>Suggested group:</b></p> <ul style="list-style-type: none"> <li>• 25% <i>Ficinia nodosa</i></li> <li>• 25% <i>Goodenia ovata</i></li> <li>• 25% <i>Veronica perfoliata</i></li> <li>• 25% <i>Limonium perezii</i></li> </ul>

		Species	Habit	Maintenance needs
Primary	Low maintenance	** <i>Themeda triandra</i>	Grass	Can be cut back in early spring, only lightly prune.
		** <i>Poa poiformis</i>	Grass	Cut to the ground in Autumn only when required (every 2-3 years).
		** <i>Juncus pallidus</i>	Sedge/rush	Should be left unpruned for 3-4 years, should be cut to a few inches above the ground in autumn.
		** <i>Goodenia ovata</i>	Subshrub	Should be left unpruned for 2-3 years. Can be pruned/slashed to rejuvenate.
		** <i>Carex appressa</i>	Sedge/rush	Cut back to roughly half its size every few years to tidy up.
		** <i>Ficinia nodosa</i>	Sedge/rush	Cut back to a few inches above ground level every 3-4 years if needed. Can be left unpruned for some time.
		** <i>Juncus amabilis</i>	Sedge/rush	Can cut back dead foliage to the ground.
		** <i>Juncus flavidus</i>	Sedge/rush	Can cut back dead foliage to the ground.
Secondary	Low maintenance	** <i>Carpobrotus modestus</i>	Succulent herb	Requires no pruning except to restrict size.
		** <i>Dianella longifolia</i>	Perennial herb	Cut back to roughly half its size every 3-4 years if needed. Can be left unpruned for some time.
		** <i>Dianella revoluta</i>	Perennial herb	Cut back to roughly half its size every 3-4 years if needed. Can be left unpruned for some time.
		** <i>Lomandra longifolia</i>	Perennial herb	Cut back to roughly half its size every 3-4 years if needed. Can be left unpruned for some time.
		** <i>Myoporum parvifolium</i>	Shrub	Pruning annually will help to increase lifespan and maintain plant density.
		** <i>Hardenbergia violacea</i>	Subshrub	Can be pruned annually to maintain density. Can be pruned to the ground to rejuvenate.
		** <i>Veronica perfoliata</i>	Perennial herb	Flowering stems can be cut to base after flowering.
		<i>Limonium perezii</i>	Perennial herb	Flowers can remain on the plants for a long time but should eventually be removed.
		<i>Tulbaghia violacea</i>	Perennial herb	Can be cut back after flowering.
		<i>Phormium tenax</i>	Perennial herb	Pruning only needed every 5 years or so. Old leaves should be cut to the base.
		<i>Kleinia mandraliscae</i>	Perennial herb	Low maintenance. Can be cut back if it gets too large.
		* <i>Callistemon</i> 'Little John'	Shrub	No special maintenance needs. Can be pruned back to control size.
		* <i>Correa</i> 'Dusky Bells'	Shrub	Tip pruning helps to maintain density. Responds well to hard pruning.
		** <i>Correa alba</i>	Shrub	Needs no special attention, responds well to pruning
		<i>Convolvulus sabatius</i>	Perennial herb	No special maintenance required, can be hard pruned.
	Moderate maintenance	<i>Kniphofia</i> 'Winter Cheer'	Perennial herb	Flowers stems can be removed and old leaves cut back in spring.
		* <i>Melaleuca incana</i>	Shrub	Prune annually to maintain density. Can be hard pruned to rejuvenate.
		* <i>Melaleuca thymifolia</i>	Shrub	Prune annually to maintain density. Can be hard pruned to rejuvenate.
		<i>Sedum</i> 'Autumn Joy'	Succulent herb	Plants can be cut back to the ground. Flower heads can remain on plant for some time as they develop an attractive bronze appearance.
		* <i>Anigozanthos cultivars</i>	Perennial herb	Divide every 3-5 years to maintain vigour.
		** <i>Dodonea viscosa</i>	Shrub	Should be annually pruned to maintain density. Can be hard pruned to rejuvenate.
		* <i>Eucalyptus macrocarpa</i>	Shrub	Plants should be pruned annually to improve plant form. Can be coppiced to produce many shoots.
		<i>Salvia canariensis</i>	Shrub	Should be pruned annually after flowering to maintain form.
		** <i>Chrysocephalum semipapposum</i>	Perennial herb	Remove flowering stems once spent and cut back hard in autumn.

\*\*= Indigenous

\*= Native

## Example planting plan and plant schedule



This page should be used as a guide for what to include in a basic planting plan. The quantities for plants should be altered based on raingarden size. Initial density should be high to increase root density and reduce potential for weed invasion when plants are first installed. The planting plan indicates the size and placements of plants when they are planted, rather than their eventual size.

This planting plan is based on plants from the 'Residential' planting group.

Planting density 10 plants/m <sup>2</sup> . Area= 10 m <sup>2</sup>					
Botanical name	Code	Common name	Habit	Size at maturity (h x w)	Quantity
Ficinia nodosa	Fno	Knobby Club-rush	Sedge/ rush	0.5 x 0.5 m	25
Goodenia ovata	Gov	Hop Goodenia	Subshrub	1 x 1.5 m	25
Veronica perfoliata	Vpe	Digger's Speedwell	Perennial herb	0.8 x 1 m	25
Limonium perezii	Lpe	Perennial Statice	Perennial herb	0.6 x 0.7 m	25
Total					100