



sustainable gardening IN MITCHELL AND STRATHBOGIE SHIRES



Contact us

Mitchell and Strathbogie Shires are committed to contributing to the achievement of sustainability within the region and promoting sustainability to others.

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Mitchell Shire Customer Service Centre Locations

Kilmore Library and Customer Service Centre, 12 Sydney Street

Residents Information Line: (03) 5734 6200 Fax: (03)5734 6222

Customer Service Hours: Monday: 9am – 5pm; Tuesday: 9am – 6pm;

Wednesday: 9am – 5pm; Thursday: 9am – 6pm; Friday: 9am – 5pm; Saturday: 9am – 5pm; and Sunday: 9am – 5pm.

Seymour Office and Customer Service Centre, 28 High Street

Residents Information Line: (03) 5734 6200 Fax: (03)5734 6222

Office Hours: 9am - 12.30pm, 1pm - 4pm Monday to Friday (Closed 12:30pm - 1pm)

Wallan Library and Customer Service Centre, Wellington Square

Residents Information Line: (03) 5734 6200 Fax: (03)5734 6222

Customer Service Hours: 10am – 6pm; Tuesday: 1pm – 6pm; Wednesday: 10am – 6pm;

Thursday: 1pm – 6pm; Friday: 10am – 6pm; Saturday: 10am – 1pm; and Sunday: closed.

Contents

This booklet recommends plants to assist gardeners in making appropriate choices to reduce the use of weeds in home gardens which have the tendency to escape garden boundaries. Indigenous plants to the Shire region are suggested first. When an indigenous option is not available, plants native to Victoria have been listed. Plants in this booklet are largely selected based on their non-invasive characteristics and commercial availability for the home gardener.

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Pictured right: Love Creeper (*Comesperma volubile*)



Introduction



From the orchids of Old Sydney Road, Wallan to the magnificent River Red Gums of the Goulburn River, Mitchell and Strathbogie Shires have a diverse natural environment that offers inspiration for the home gardener.

Connecting with nature through gardening can be beneficial for both the environment and our health.

There are many magnificent, creative and productive gardens within our community which we can all learn from. Many common garden practices are sustainable, such as composting, whilst other gardening choices can have a detrimental impact on our natural environment.

This booklet has been produced to assist gardeners in making sustainable garden choices, including;

- ∴ Using indigenous and non-invasive native species
- ∴ Reducing weeds
- ∴ Limiting water use
- ∴ Reducing chemical use
- ∴ Composting and using worm farms
- ∴ Use of renewable resources for the garden

“Gardens may assist natural systems to adjust to climate change by increasing biological connectivity through green corridors and acting as green refuges”

Our area is home to many beautiful, hardy native plants that can be used in all styles of gardens, whether you're planting a purely native garden or using natives together with exotic plants, from contemporary and cottage gardens to courtyard and bush gardens.

Sustainable gardens can be introduced gradually, for example, when an exotic plant dies, replace it with an indigenous species. Sustainable gardens are low maintenance and lower cost, as they require less water, fertilisers and chemicals, and less mowing and pruning.

It is important in our community to have diverse and interesting gardens. It is also important to consider the origins of the products we use in our gardens and the impacts our purchasing decisions can have on other communities.

This booklet can assist you with creating a sustainable garden that fulfils your needs and desires while also providing a positive benefit to our natural environment.

We hope you find this booklet both informative and useful in creating and maintaining your own sustainable garden.

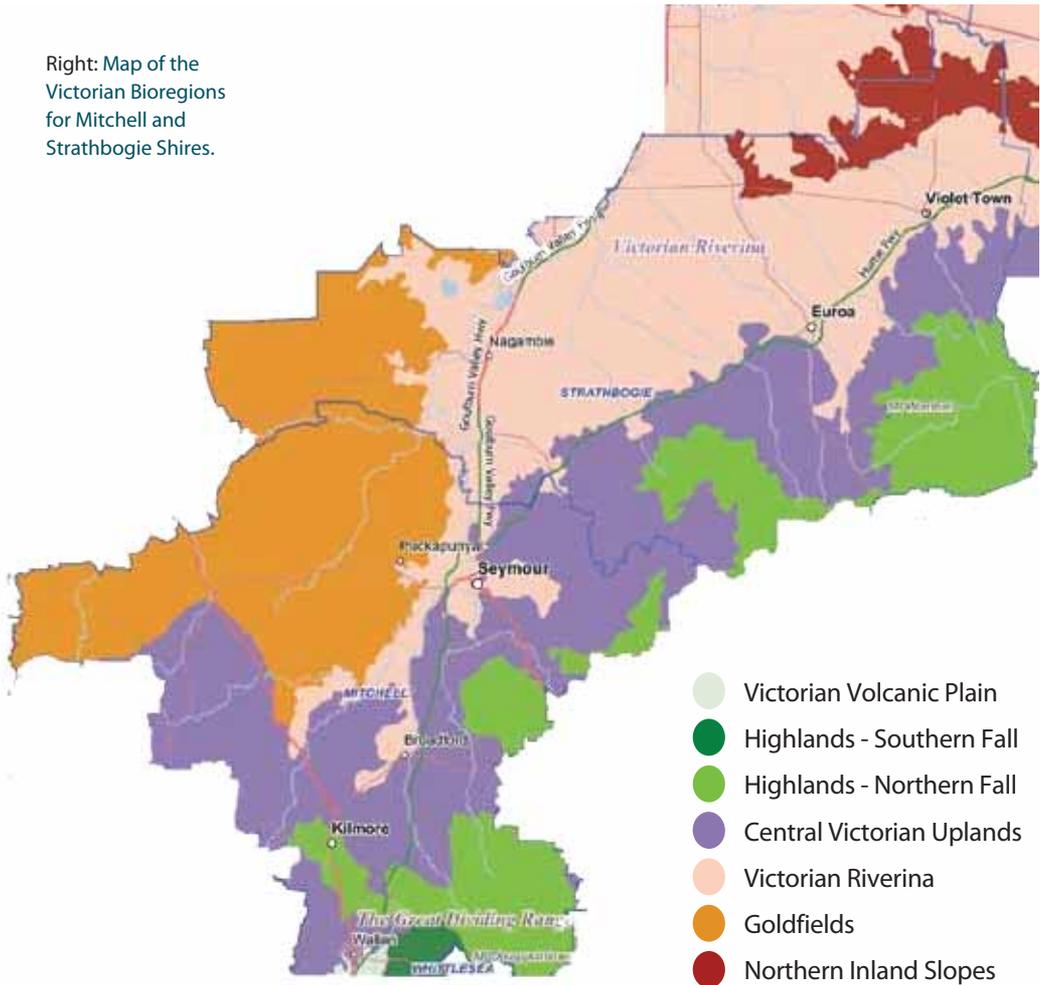
Below: The Euroa Guinea-flower (*Hibbertia humusa* subsp. *erigens*), an endangered plant species, is found only in Mitchell and Strathbogie Shires.



Bioregions of Mitchell and Strathbogrie Shires

Bioregions are defined as large land areas, whose particular soil, climate, topography, and rainfall patterns give rise to a unique blend of plants and animals. Mitchell and Strathbogrie Shires are both home to a variety of bioregions, representing an astonishing array of ecosystems, flora and fauna.

Right: Map of the Victorian Bioregions for Mitchell and Strathbogrie Shires.



Home gardeners looking to create sustainable gardens can benefit from knowing their bioregions, and in turn, understanding which plants and animals are locally native to the area, as well as being better able to garden in harmony with their soil, climate and rainfall.

Mitchell and Strathbogie Bioregions Explained

VICTORIAN VOLCANIC PLAIN - Flat to undulating plains, vast open areas of grasslands, small patches of open woodland, stony rises from old lava flows, peaks of extinct volcanoes and scattered large shallow lakes. Soil can be variable, but is often acidic. This bioregion is home to a large volume of reptiles and birds, plants and animals, with the Eastern Barred Bandicoot, Corangamite Water Skink and Basalt Rustyhood Orchid found only on the Victorian Volcanic Plains.

HIGHLANDS - SOUTHERN AND NORTHERN FALL - The southerly and northerly aspects of the Great Dividing Range, the Victorian highlands consist of high plateaus, moderate to steep slopes and flats along the valleys. Soil can vary from deep and well-drained to heavy, clayey and acidic, especially in lower lying areas. Vegetation types include moist and dry forests, heathy woodland to grassy forest areas, providing habitat for an astonishing array of fauna and flora, including 533 animal species, and over 1000 plant species. Leadbeater's Possum, Gully Grevillea, Sticky Wattle, Aniseed Boronia, Tree Geebung, Forest Sedge, Buxton Gum and Shiny Phebalium are endemic to these regions.

CENTRAL VICTORIAN UPLANDS - Extending from Beaufort in the west through Ballarat, Seymour and Alexandra to Beechworth in the east, this bioregion was formerly dominated by foothill forest, some of which is still found on the upper slopes. Large areas of grassy and herb-rich woodland are home to a surprising array of flora and fauna species, despite the poor soils found throughout this region.

VICTORIAN RIVERINA - The majority of this bioregion is characterised by flat to gently undulating land, featuring soil types that have a high clay content and are prone to both waterlogging and setting rock hard when dry. Grasslands and grassy woodlands are the predominant vegetation types, along with diverse wetland ecosystems. This area is home to a large population of reptiles, insects, amphibians, plants and animals, including Yellow-footed Antechinus, Fat-tailed Dunnart, and the Lesser Long-eared Bat.

GOLDFIELDS - The Goldfields bioregion is dominated by rolling plains and low hills between Stawell and Wangaratta, north of the Great Dividing Range. It supports fragmented native Box-Ironbark and Dry Foothill forests and grassy, herb-rich woodlands on relatively poor soils. Endemic plant species of the Goldfields bioregion include several orchids, Narrow Goodenia, Whorled Zieria and Goldfields Grevillea. The threatened Swift Parrot and the Squirrel Glider also call this region home.

NORTHERN INLAND SLOPES - Foothill slopes and minor ranges separated by river valleys are the predominant landscapes through this bioregion, with the soil being somewhat clay and prone to waterlogging. Grassy woodlands and dry forests are home to the Carpet Python, Squirrel Glider, Brush-tailed Phascogale, Turquoise Parrot, Grey-crowned Babbler and flora such as Spur-wing Wattle, Green Grevillea, Hairy Hop-bush, Warby Swamp-gum, Dookie Daisy, Narrow Goodenia, and Cupped Bush-pea.

Mitchell and Strathbogie Shires

Environmental Values

Mitchell and Strathbogie Shires contain some of the most ecologically important areas within the State of Victoria. The region encompasses a range of flora and fauna-rich areas, including incredibly valuable wetlands, threatened Grassy Woodlands and Plains Grassy Woodlands, as well as Box-Gum Grassy Woodlands, a nationally threatened landscape type.

Native vegetation is an important environmental asset of both Mitchell and Strathbogie Shires. Native vegetation is not just the trees but also the equally important, but often overlooked, understorey. The understorey consists of small trees, shrubs, grasses, ground orchids and herbs. Both Shires contain significant tracts of grassy woodlands, which, if visited at the right time of year, will see the understorey sparkle with colour from the brightly flowering bush-peas, gorgeous Tiger Orchids and elusive Leafy Greenhoods.

Our plants are very significant at the continental scale topography and overlapping climate zones. There are many species of plants and animals which are absent from, or rare in, the rest of Victoria. Some of our significant plant species include: Lima Stringybark, Highland Bush-pea, Euroa Guinea-flower and the Hairy Hop-bush.

The fauna in our Shires consists of a huge variety of strange and unique animals, including mammals, amphibians, reptiles, fish, insects and other invertebrates, many of which are threatened within Victoria or Australia. These include the Powerful Owl, Turquoise Parrot, Eastern Horse-shoe Bat, Squirrel Glider, Yellow-bellied Glider and the Brush-tailed Phascogale. Waterways and wetlands are also home to much significant fauna, including Macquarie Perch, Flat-headed Galaxias, Murray Spiny Cray, Trout Cod and the Growling Grass Frog.

What we do in our gardens and properties can have a significant impact on the health and long-term survival of these precious plants and animals within our Shires.



Sustainable Garden Design

Many gardens today still maintain a traditional layout that stems from English or European gardens many years ago. This includes a paved area, large open lawn and flowerbeds of exotic plants around the outside. Today our busy lifestyles are preventing us from having time to spend enjoying and maintaining our gardens. Proper planning in advance can help you to create a garden that benefits your local environment, is easy to establish and maintain, and still looks great.

When you plan changes to your garden take some time to consider what elements you want in the garden (shed, washing line, kids' play area, entertainment area), and what the features of your garden site are (sunny, slope, shade, privacy) and try to work them in with elements of a sustainable garden listed below.

Biodiversity protection and enhancement

Our region has some of the most important biologically diverse natural assets in Australia. Mitchell and Strathbogie Shires also contain critical habitat for many threatened flora and fauna species.

TIPS TO PROTECT LOCAL BIODIVERSITY

- ⋮ Link or add to any existing indigenous vegetation
- ⋮ Consider working with neighbours to link tree canopies especially in new housing estates
- ⋮ Remove or at least control environmental weeds
- ⋮ Recognise that native animals will be attracted to and flourish in indigenous gardens
- ⋮ Retain dead trees for habitat value, to provide roosting sites and hollows for nesting
- ⋮ When planning for bushfire prevention, consider the biodiversity as well

Right: Native bees on a Showy Podolepis (*Podolepis jaceoides*)

Left: Milkmaids (*Burchardia umbellata*) are found throughout the region



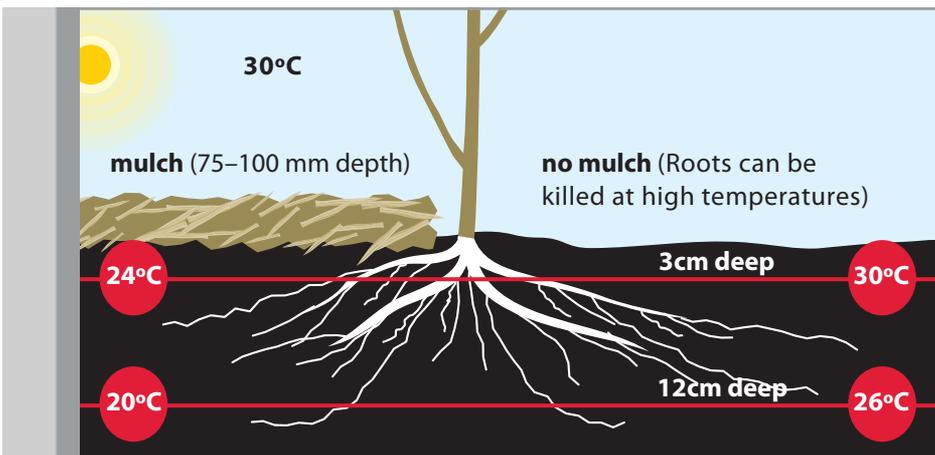
Water conservation and quality

With water resources increasingly limited, all garden designs should incorporate efforts to reduce demand for potable or 'mains' water for non-drinking purposes, and to improve the quality of water before it enters waterways.

TIPS FOR SAVING WATER IN THE GARDEN

- ⌘ Keep lawn areas to a minimum – lawns consume 90% of water used in Australian gardens
- ⌘ Lawns can be replaced with porous paving, ground cover plants, gardens or outdoor structures such as playgrounds and gazebos
- ⌘ If you retain your lawn consider watering with greywater (see 'Greywater' section, page 38)
- ⌘ Choose plants that have low water requirements once established – in most cases this will be indigenous plants
- ⌘ Place plants that require more water (e.g. ferns) in cooler more shaded areas of the garden
- ⌘ Group plants together according to their water requirements to make irrigation more efficient
- ⌘ Use mulch (75–100mm recommended depth) or indigenous ground covers to reduce water evaporation from garden beds
- ⌘ Where irrigation is required use drip lines or subsurface 'weeper' hoses, not micro-sprays which waste up to 70% of the water through drift and evaporation. Keep your system well maintained to avoid leaks

Below: Mulch protects roots and reduces water evaporation.



- Take account of all water restrictions in place and how or when your gardens may be watered.

For more information on water restrictions visit

www.ourwater.vic.gov.au or contact your retail water authority:

Yarra Valley Water (Wallan and Beveridge)

www.yvw.com.au

Coliban Water (Tooborac)

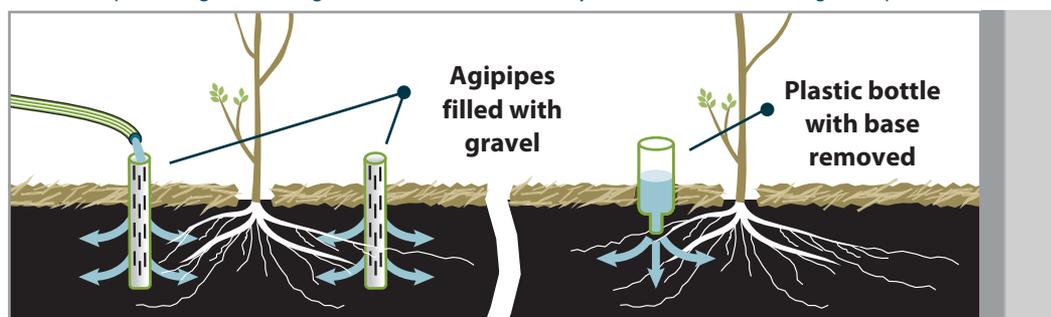
www.coliban.com.au

Goulburn Valley Water

www.gvwater.vic.gov.au

(Wandong/Heathcote Junction, Kilmore, Broadford, Tallarook, Pyalong, Seymour and Strathbogie Shire)

Below: Deep watering of trees/large shrubs delivers water slowly to the roots and encourages deep roots.



TIPS FOR CATCHING AND USING WATER ON-SITE

- Install a greywater tank and treatment unit for reusing household water for use in the garden (see 'Greywater' section, page 38)
- Use porous paving to allow for water **infiltration** into your garden, not stormwater **run off**
- Consider integrating a water treatment system to help capture and purify stormwater (rain) or wastewater (septic) on site for reuse (see 'Raingardens' section, page 19 - 20)
- Incorporate a rainwater tank into your garden to collect water from our roof for watering gardens, washing cars, fighting bush fires or toilet flushing. Rainwater tanks now come in a wide range of designs and colours to suit diverse needs

How to size a tank for your home

You need to consider variations in monthly rainfall and water use between the seasons to purchase a tank size to suit your needs.

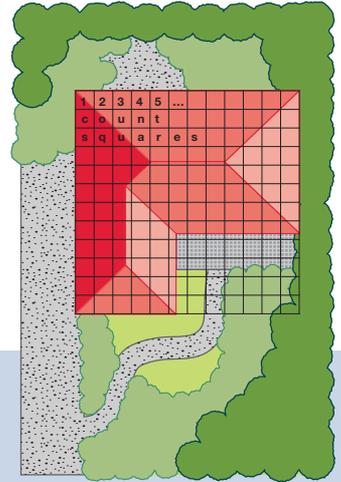
To calculate your catchment area for a rainwater tank, you need to know your roof area for proposed collection and average rainfall for your area.

For rainfall information visit: <http://reg.bom.gov.au/climate/data/>

For every 1mm of rain on 1m² of roof = 1 litre

Example: 150m² roof area with monthly rainfall of 50mm

150 x 50 = 7,500 litres over that month



To further reduce your consumption of drinking water supplies, you can plumb your rainwater tank directly to your toilet for flushing. An average household uses 15% of its water consumption per year for toilet flushing.

For more information on water saving devices visit:

Green Plumbers www.greenplumbers.com.au or your local water retailer:

Yarra Valley Water

www.yvw.com.au

Coliban Water

www.coliban.com.au

Goulburn Valley Water

www.gvwater.vic.gov.au

Minimising energy requirements

Reducing the energy requirements to establish and maintain a garden is most effective if done at the planning stage, leading to a well maintained and enjoyed garden.

Energy requirements come in many forms:

- :: Human labour to mow lawns, water plants, apply fertilisers and herbicides
- :: Petrol or electricity to run mowers and whipper-snippers
- :: Electricity to run pond pumps, lighting and leaf blowers
- :: Energy costs involved in producing and using herbicides or fertiliser
- :: Transport of garden products over long distances

TIPS TO REDUCE ENERGY REQUIREMENTS

- ∴ Keep lawn areas to a minimum – they require a lot of energy (water, fertiliser, mowing) in their establishment and continual maintenance
- ∴ When creating new lawns use grass seeds, not instant turf which uses large amounts of water and fertilisers to “manufacture” and establish in your home garden
- ∴ Use locally available products to reduce transport energy costs and to keep with the local character. Avoid river pebbles harvested from Asia or Merbau timber decking from Indonesian rainforests
- ∴ Choose plants that are not weedy and will not require on-going intensive maintenance, including human labour to mow or prune and herbicides to control
- ∴ Select plants and planting arrangements that contribute to the solar efficiency of buildings by providing shade in the summer and allowing sun through in the winter
- ∴ Install solar lighting for garden paths, outdoor areas and solar powered pond pumps

Sustainable purchasing

Mitchell and Strathbogie Shires are committed to the principles of sustainability. Landscape designs on private property need to account for environmental sustainability by:

- ∴ Using materials produced from renewable resources: mulch, garden sleepers, decking materials, stone/recycled brick (see pages 62 - 63)
- ∴ Using materials that are locally sourced so do not carry high transportation costs to the environment
- ∴ Selecting plants and built features that conserve water and treat stormwater runoff

Bushfire management

If your property is located in a potential bushfire area you will need to appropriately manage the vegetation in the garden around your home. Proper planning in the design phase of your garden can provide the appropriate mix of elements required to reduce the risk while protecting the biodiversity values of your property.

Please seek additional advice on how to manage your vegetation if your garden is in a high bushfire risk area (see ‘Further Information’ on page 12).

TIPS TO REDUCE FIRE RISK

- ∴ Design breaks to vegetation (gravel driveways, pathways) around your house to separate areas of fuel to slow the spread and speed of the fire and reduce the level of heat
- ∴ Graded or ploughed breaks disturb soil which encourages weeds or causes soil erosion so consider other ways of creating low-fuel areas, such as permeable paving or slashing
- ∴ Consider the building location in relation to prevailing summer winds, as this indicates the most likely direction from which a bushfire may come, and remember that bushfires travel much faster up hill
- ∴ Ensure good access to water for firefighting. This may mean incorporating a water tank into your garden, ensure all above-ground water fittings are metal ones and ensure you have adequate hose length to water down your garden. Check with your local CFA for preferred fitting standards. If a fire threatens your property, water restrictions are waived to allow residents to defend their homes. Keep plants well-watered and moist as this can reduce how easily a plant will become fuel for a fire, and use mulches with a low flammability
- ∴ Remove existing weeds and do not introduce new ones into the garden as weeds often contribute to high fuel loads that feed fires
- ∴ Do not plant large shrubs and trees too close to buildings (within 2m) as the radiant heat from burning trees can shatter windows and cause materials to self combust. Trees may also drop limbs and send the fire over the building
- ∴ Along natural watercourses plant indigenous vegetation suited to the local waterway – these areas naturally retain moisture and can be less fire prone
- ∴ Remove fine fuels such as twigs, leaves and bark, from around your house, including your roof and gutters. These fine fuels burn very easily and assist the fire in spreading quickly

“You should not rely on published lists of ‘fire-retardant’ or ‘hard to burn’ plant species. Many of these lists are out of date and advocate plants that may have little impact on the safety of your home. Some of these plants are also weeds.” CFA References: **Managing vegetation around your home** brochure, **Living in the bush** bushfire survival plan workbook.

FURTHER INFORMATION

Shauble, J. (2004), **The Australian Bushfire Safety Guide**, Harper Collins

Ramsay, C. and Rudolph, L. (2003), **Landscape and Building Design for Bushfire Areas**, CSIRO Publishing

CFA brochure **Building in a Wildfire Management Overlay** applicants kit

CFA: www.cfa.vic.gov.au Phone: 9262 8444

Garden Design Examples

Using indigenous plants in your garden does not mean that you cannot enjoy the latest garden styles. Following are some ideas that can be adapted to suit a range of designs sustainably.

Photo: A well-designed sustainable garden, making good use of indigenous, native and exotic plants.

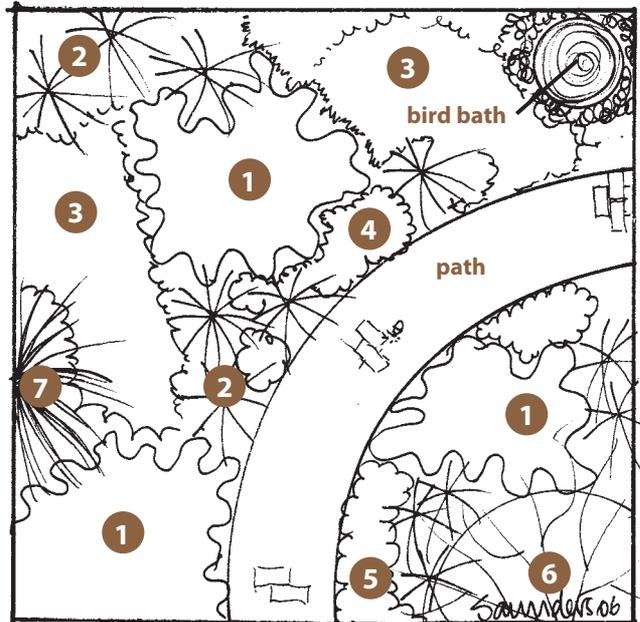


Cottage garden style

The cottage garden look is easily achieved with indigenous plants but unlike the traditional cottage garden, this garden can look interesting and colourful all year round because many indigenous plants flower in winter. And this cottage garden is water wise too. Tall Bluebells (*Wahlenbergia stricta*) look stunning growing with the Clustered Everlasting (*Chrysocephalum semipapposum*).



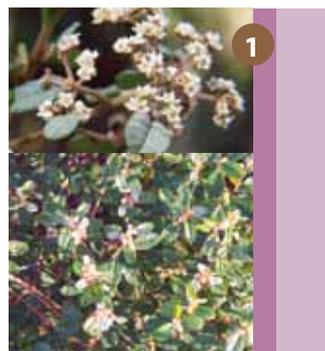
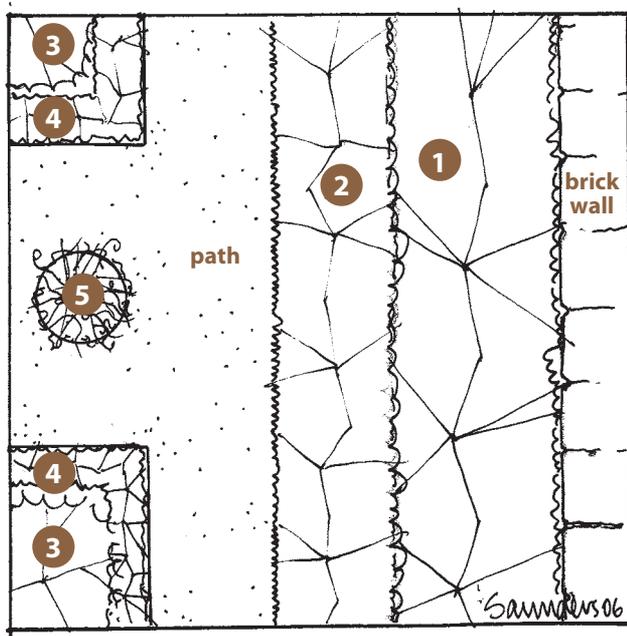
- 1 Tall Bluebells (*Wahlenbergia stricta*)
(30cm x 50cm)
- 2 Black-anther Flax-lily (*Dianella revoluta*)
(50cm x 1.5m)
- 3 Clustered Everlasting (*Chrysocephalum semipapposum*)
(50cm x 1.5m)
- 4 Cut-leaf Daisy (*Brachyscome multifida*)
(20cm x 50cm)
- 5 Common Correa (*Correa reflexa*)
(60cm x 1.5m)
- 6 Rock Correa (*Correa glabra*)
(1.5m x 1.5m)
- 7 Common Tussock Grass (*Poa labillardierei*)
(50cm x 1.2m)



Formal garden style

There are many indigenous plants that can easily be grown into neat clipped hedges and shapes to complement the straight lines of a formal garden. A formal garden requires a bit more maintenance but at least the plants chosen can be water wise and more suited to the local environment and Australian climate. Here a hedge of Rock Correa (*Correa glabra*) is grown in front of a taller hedge of Dusty Miller (*Spyridium parvifolium*), which is against a brick wall. Straight paths intersect in front and a large urn filled with Running Postman (*Kennedia prostrata*) greets amblers.

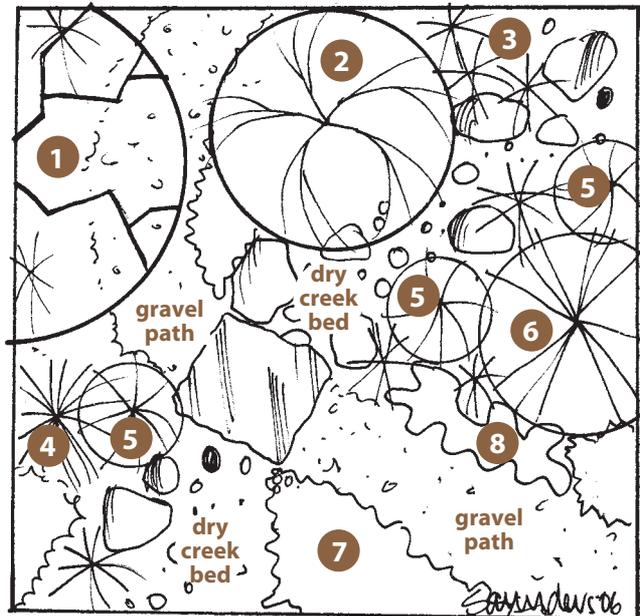
- 1 Dusty Miller (*Spyridium parvifolium*)
(1.5m x 1.5m)
- 2 Rock Correa (*Correa glabra*)
(1.5m x 1.5m)
- 3 Hop Goodenia (*Goodenia ovata*)
(1.8m x 1.5m)
- 4 Common Correa (*Correa reflexa*)
(60cm x 1.5m)
- 5 Running Postman (*Kennedia prostrata*)
(10cm x 2m) growing in an urn



Informal bush gardens

The famous Australian bush garden has a relaxed easy-care feel about it. A meandering path allows for surprises to be created around corners. These gardens are a haven for wildlife and a great refuge for humans. And with a bit of planning, you can ensure there is something in flower just about all year round. Remember to keep low-growing plants close to path edges, and medium and taller plants behind them.

- 1 Black Sheoke (*Allocasuarina litoralis*)
(8m x 4m)
- 2 Golden Wattle (*Acacia pycnantha*)
(8m x 3.5m)
- 3 Black-anther Flax-lily (*Dianella revoluta*)
(50cm x 1.5m)
- 4 Common Tussock Grass (*Poa labillardierei*)
(50cm x 1.2m)
- 5 Austral Indigo (*Indigofera australis*)
(1.5m x 1.5m)
- 6 Dusty Miller (*Spyridium parvifolium*)
(1.5m x 1.5m)
- 7 Tall Bluebells (*Wahlenbergia stricta*)
(30cm x 50cm)
- 8 Clustered Everlasting (*Chrysocephalum semipapposum*)
(50cm x 1.5m)



Water features

There are a huge variety of plants that belong in the category of water plants. Some like to be in water all the time, but others prefer only boggy conditions, like Tall Sedges (*Carex appressa*) and in fact many cope with summer drought.

Water features vary from formal constructed ponds, which can be very costly, through to naturalistic streams and ponds that can be relatively cheap to build. Both types can be suitable for a variety of water plants. With a bit of extra planning a water feature can become a 'frog bog' and attract frogs to your garden to control mosquito populations and provide a night time chorus (see 'Frogs' section, pages 23-25).

Below: This natural water feature is easy to create, and once established with a variety of plants, is easy to maintain.



Gardens for Kids

People of all ages can enjoy gardening but children, in particular, will have lots of fun and gain special benefits. There are many benefits to creating a space for kids to play in your garden and to encourage them to take an interest in sustainable gardening. Tree houses, sand pits and native fairy gardens (as well as growing fruit and vegies) are all fun things to do. To get kids interested and involved in in gardening, consider:

- ⌘ Giving children their own garden space - it doesn't have to be big, it can start in a large container or in a few pots
- ⌘ Growing interesting plants like sunflowers, corn, pumpkins, tomatoes and strawberries
- ⌘ Using a trellis or tepee to grow beans and peas
- ⌘ Planting flowers that attract butterflies, ladybirds and other interesting insects or birds
- ⌘ Making a scarecrow
- ⌘ Visiting community gardens, children's farms or the botanic gardens for ideas



Getting kids involved in growing their own edibles is a great way to connect children to where their food comes from, as well as fostering an interest in nature, gardening, and eating fresh home grown produce.

Easy edibles for kids to grow include: peas, beans, cherry tomatoes, sweet corn, rainbow silverbeet, pumpkins, cucumbers, zucchinis, and most herbs. Don't forget to pop in some colourful, easy-to-grow flowering plants in the patch to attract good insects and add colour.

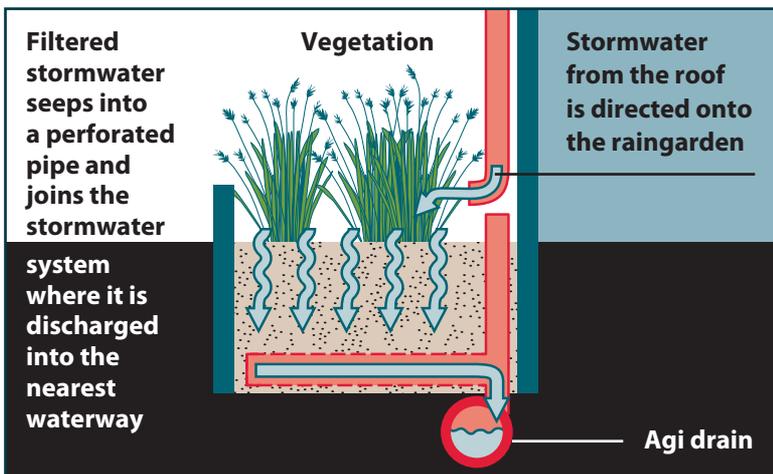
You could also create a sensory garden, using varieties of plants that have touch, smell, sound and taste qualities as well. Some great plant species for kids' sensory gardens include Lambs Ears, Lavender, Snap Dragons, Mints and many succulents. The most important element in a kids' garden is FUN!

Raingardens

Raingardens have water directed into them from a downpipe or paved area. They are designed to slow down rainfall during a rain event, but do not form a wetland or frog bog. By using a free-draining sand, water is able to flow through the system at a fairly rapid rate which cleans the water and avoids flooding. By slowing down the speed of the water, the filter media and plants used are able to assist with removing pollutants which would normally pass directly into our drains and local streams. Additionally, the plants will also provide habitat for native fauna such as birds and butterflies. Keeping rain where it falls by putting it into a raingarden is a simple solution to stormwater pollution and is part of making your home water-sensitive.

How do I create a raingarden?

Raingardens can be created to look or feel however you would like your garden to look or feel. For instance they can be built as raised beds or excavated at ground level. When it rains, the water is directed from hard surfaces, such as a roof, guttering or paved areas into the raingarden, where the free-draining sand (as outlined in the diagram below) and your plants are able to remove and trap pollutants from the water, and will over time, naturally break these down (decompose). The water then passes into an agi-pipe at the base of the raingarden, allowing the cleansed water to flow into the stormwater and waterway system safely. There is a working raingarden at the Wallan Transfer Station.



Left: How a raingarden works.
Note: If your raingarden abuts a wall of your house, ensure that you use an impermeable barrier to prevent water seepage under your building.

Note: A raingarden must have an overflow pipe connected to the stormwater system to reduce the risk of localised flooding in the event of a major storm or downpour. If you find that water is left sitting or pooling on the surface of your raingarden, particularly after rain has stopped, then your system is not working correctly and may need re-setting – it should be free draining.

A wide range of native plant species are suitable for raingardens. When choosing plants for your raingarden make sure they have the following qualities:

- ⋈ Tolerate short periods of inundation followed by longer dry periods
- ⋈ Have spreading rather than clumped growth forms
- ⋈ Are perennial rather than annual
- ⋈ Have deep fibrous root systems
- ⋈ Would form understorey if grown with shrubs and trees



Above: Raised (above ground) raingarden, Violet Town.

TIPS TO HELP YOUR RAINGARDEN MATURE AND FUNCTION WELL

Raingardens are low maintenance especially when planted with native plant species. They don't need to be watered, mowed or fertilised. However these few simple tips can help your raingarden to mature and function well:

- ⋈ If it doesn't rain, water your new garden until your plants have established (usually the first year or so)
- ⋈ Raingardens need to be mulched with rocks and pebbles. Organic mulch is not suitable as it can simply float away in heavy rain! The fine material in organic matter can also cause the agi pipe to block, so the system won't work properly
- ⋈ Weed where necessary
- ⋈ Reduce fast flowing water over your garden to limit erosion during heavy rainfalls by keeping your raingardens flatter or in a depression, as opposed to a steep garden bed
- ⋈ Inspect your garden regularly – replace plants and repair erosion in your garden when necessary
- ⋈ Don't park, drive over or squash your raingarden. If your raingarden is squashed (compacted), water will no longer freely move through it

For more information on water treatment systems such as 'raingardens' visit: www.melbournewater.com.au/wsud

Habitat Gardening

Attracting native animals to your garden can add extra colour and interest. It can assist pest control by attracting insect predators, and can also contribute to keeping animal populations viable by providing integral links for wildlife to commute between bushland areas. All you have to do is provide your garden visitors with natural sources of food, water and shelter.

Small Mammals

There are a number of small native mammals that can become regular visitors to a garden. Brush-tailed possums and Ring-tailed possums generally rely on leaves for food and are often considered a pest by gardeners who enjoy growing plants like roses.

If your garden is close to bushland or near large old trees with hollows, your garden may already host various nocturnal mammals. The tiny marsupial Agile Antechinus looks like a mouse but is closely related to carnivores such as the Quoll or Tassie Devil. Another visitor from the possum family is the Sugar Glider (right). These delightful creatures feed extensively on insects and flowers, and get their name from both their ability to glide, and from their habit of biting the bark of Eucalypts and Wattles to feed on the sugary sap. A favourite source of sap is the Black Wattle (*Acacia mearnsii*). Sugar Gliders are social animals which nest together in family groups in a tree hollow. Small insectivorous bats or "Micro-bats" may be seen flying at dusk. During the day they shelter in hollows, under loose bark or in roof spaces. A Micro-bat can eat up to twice it's own weight in insects, such as mosquitos, in one night.



Photo: Mark Lambie, Photographer.

Many wildlife friendly gardens now use nesting boxes if there are no mature trees nearby. Each species requires different specifications. Almost any sort of weather-proof box with a small entry and at least one wall that is rough enough for them to grip with their feet (such as carpet or hessian hung inside) will suit Micro-bats. Much research has however gone into the design of nest boxes so they encourage native animals to take up residence while discouraging unwanted pests. Design specifications are readily available on the internet, or ready made nest boxes can be purchased from specialist manufacturers.

Birds

Birds are beautiful creatures that are a joy to watch in any garden. In addition, because many birds feed on plant pests such as aphids and scale they also contribute to non-chemical pest control in the garden! To attract birds to your garden consider the following points.

Shelter

Birds need shelter from predators such as cats, foxes and predatory birds. By providing prickly or dense plants at various levels in your garden, and particularly near water sources, you can help protect your feathered visitors.

Water

A reliable water source, particularly in summer and most especially in drought will attract birds to your garden. If you install a birdbath place it near dense or prickly plants to provide birds with protection from predators.

Food

Feeding stations are not recommended as a way of attracting birds. Use native plants as an alternative to avoid creating dependency, which can impact on their long term survival in the wild.

Below: Common throughout much of Mitchell and Strathbogie Shires, Tawny Frogmouths (like this mother and chick) hunt insects, skinks and small mammals by night, and rest on tree branches during the day.

Photo: Kerrie MacKenzie



Small birds

Silvereyes, Wrens, Finches, Fantails and Thornbills forage in the lower levels of the garden feeding on insects and helping to keep your plant pest numbers down. Native grasses such as Common Tussock Grass (*Poa labillardierei*), Kangaroo Grass (*Themeda triandra*) and Wallaby Grass (*Austrodanthonia* spp.) attract insects to the garden, as do a variety of plants such as Paperbarks (*Melaleuca* spp), Tea-trees (*Leptospermum* spp.), Wattles (*Acacia* spp.), and daisies such as Clustered Everlasting (*Chrysocephalum semipapposum*) or Cut-leaf Daisy (*Brachyscome multifida*).



Honey Eaters

Birds such as Honeyeaters, Red Wattlebirds and Spinebills are specialist nectar feeders. They use their brush-like tongues to collect nectar from the flowers of Grevilleas (*Grevillea* spp.), Paperbarks (*Melaleuca* spp.), Correas (*Correa reflexa* or *C. alba*), Banksias (*Banksia spinulosa* or *B. marginata*) and Kangaroo Paws (*Anigozanthus* spp.). These birds also like to eat insects as a source of protein.

Parrots

Crimson and Eastern Rosellas feed on Eucalypt flowers and seeds, while Cockatoos and Galahs prefer the seeds of Hakeas (*Hakea nodosa*), Callistemon (*Callistemon sieberi*) and Eucalypts (*Eucalyptus radiata* or *E. ovata*). Red-rump Parrots feed on grass seeds.

Large birds

Magpies, Kookaburras and Butcher Birds feed on larger insects, frogs and small lizards. Creating a garden with small shrubs, leaf/bark litter and logs provides habitat to encourage these creatures which then support the diets of large birds.

Right (top): Tea-trees (*Leptospermum* spp.) provide an insect-attracting shrub layer, that in turn attracts insectivorous birds.

Right (bottom): Silver Wattle (*Acacia dealbata*) is a wonderfully rich source of food that attracts insects, birds and mammals.



Butterflies

Butterflies are a welcome addition to any garden, and with a few simple design principles are easily attracted, adding movement and colour to your garden.

Nectar traps

Colourful, massed beds draw butterflies in and keep them happily moving through the garden. They particularly like blue, yellow and red, but are attracted to a large range of colours, with bold clusters of flowers more effective than single plants dotted through a garden.

Flowers

The shape of the flower is important too, with simple, flat flowers easier for butterflies to extract nectar. Double flowers with their multiple petals are too complex. But native Daisies (*Brachyscome* spp.), Pelargoniums (*Pelargonium australe*), Bluebells (*Wahlenbergia* spp.), Saltbush plants (*Atriplex cinerea*), and Pea flowers (*Bossiaea prostrata* or *Platylobium obtusangulum*) are especially useful.



Left: Australian Painted Lady butterflies can be seen from late winter and early spring in southern Australia as they migrate from NSW and Queensland.

Photo: Elaine Shallue, SGA

Position, position, position

Butterflies use the early morning sun to warm themselves and retreat to cooler, shadier places during the heat of the day. Providing a sheltered position that combines warmth and protection is ideal. Also consider adding flat rocks for butterflies to bask and to court each other. Mud puddles or a dish of damp sand can provide them with water and salts.

Host plants

Incorporate host plants for the butterfly to lay her eggs. The caterpillars are generally small and shy, and won't devastate the garden. Popular indigenous plants include Bursaria (*Bursaria spinosa*), Sedges (*Gahnia sieberiana*) and Mat-rush (*Lomandra longifolia*), and grasses such as Kangaroo Grass, Wallaby Grass and Common Tussock Grass.

Lizards

Most lizards we find in our garden are little grass skinks that feed on insects and larvae. You may be fortunate enough to encounter a larger lizard such as a Blue-tongue or even a Lace Monitor, but these beautiful creatures are not as common as they used to be.

To create lizard habitat in your garden, provide the following:

- :: Tussock grass and hiding spots of rocks and logs for protection
- :: A protected sunny spot on a rock, log or brick path
- :: Natural leaf mulch to support insects and larvae they feed on



Above right: This rock retaining wall with Running Postman (*Kennedia prostrata*) rambling through it could be a great place for lizards to bask or hide, especially if there are gaps under some of the rocks.

Below: Blue Tongues aren't poisonous, they just have a blue tongue to frighten attackers, and they like to eat insects, snails and juicy plants.



Frogs

What could be more interesting than frogs in your garden? Watching tadpoles grow into frogs and then being serenaded by their calls at night. Frogs also help control pests in your garden as they eat flies, mosquitoes, slugs, snails and even spiders.

In order to enjoy frogs in your garden you will need to provide a frog bog or semi-permanent pond with certain features, but you'll also need to live near a frog population to attract them from.

Frog bogs are easy to create in heavy clay soil. Even more so if a depression is dug in an area of the garden that is already wet during winter. This will trap even more water and when planted with suitable plants these areas make great habitat for frogs.

Frog bogs are designed to dry out in summer, but there will usually be enough water below ground to keep the plants green and quite lush during dry times. Australian frogs have evolved with summer drought, so they find places to hide during drier periods.

Below: Peron's Tree Frogs can be a common sight in your garden if you provide suitable habitat and avoid chemicals.



A frog pond can incorporate one or all of the requirements for each part of the frog's lifecycle:

- ⌘ Damp bog zone for adult frogs
- ⌘ Shallow water zone for laying eggs
- ⌘ Deep zone of at least 30cm for tadpoles

Your frog pond should also have the following:

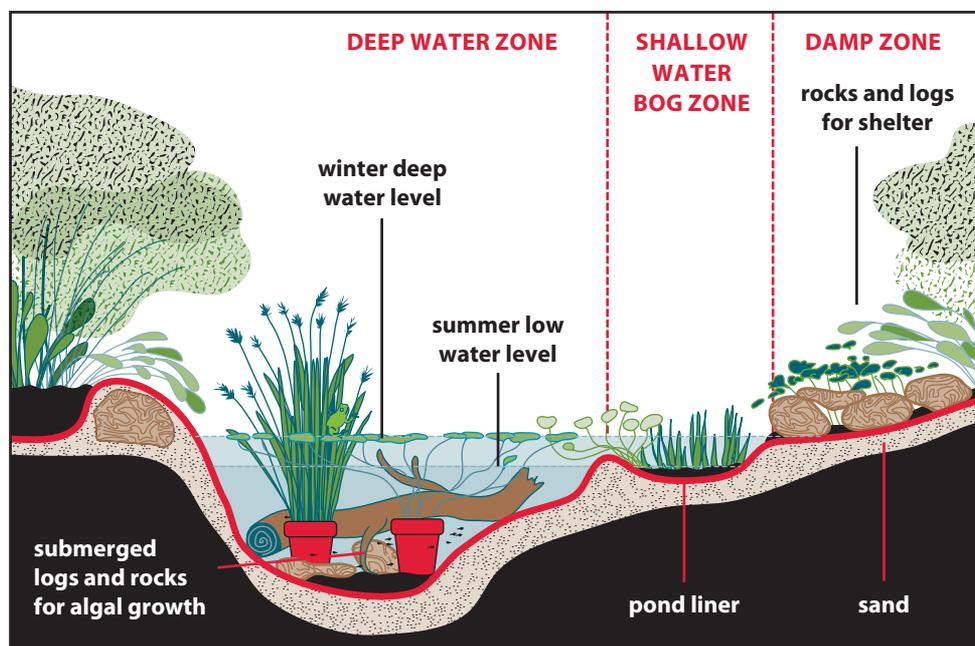
- ⌘ Soft, thick vegetation that droops into the water, for shelter and protection
- ⌘ Rocks, logs, bark and leaf litter
- ⌘ Mostly shade
- ⌘ Sloping sides for frogs to crawl out
- ⌘ Be made from non-toxic materials (concrete ponds will need to be sealed and plastic ponds be made of food-grade plastic)
- ⌘ Food plants for tadpoles (and they will eat them, so don't put in your prize water plant)



Photo: Caroline Carvalho (SYR)

Above: An example design of a frog bog

Below: The elements of a frog-friendly garden pond or frog bog





Above: Water Ribbons (*Triglochin procerum*) make a beautiful addition to your water feature or frog bog, are surprisingly drought resistant and you can even harvest them for use in your kitchen. *Beware* – Keep them netted until established as native ducks love them for snacks!

Frog-friendly plants include the following:

Grasses

Kangaroo Grass (*Themeda triandra*)
Weeping Grass (*Microlaena stipoides*)
Wallaby Grass (*Austrodanthonia* spp.)

Tufting plants

Kangaroo Paw (*Anigozanthus* spp.)
Black-anther Flax-lily (*Dianella revoluta*)

Bog plants

Soft Water Fern (*Blechnum minus*)
Thatch Saw-sedge (*Gahnia radula*)
Knobby Club-rush (*Isolepis nodosa*)
Grassy Mat-rush (*Lomandra confertifolia*)
Tassel Cord-rush (*Restio tetraphyllus*)

Water Plants

Common Nardoo (*Marsilea drummondii*)
Tassel Sedge (*Carex fascicularis*)
Jointed Twig-rush (*Baumea articulata*)
Water Ribbons (*Triglochin procerum*)
Common Reed (*Phragmites australis*)

Here are some things to avoid:

- ⋈ Most fish will eat tadpoles
- ⋈ Tadpoles and eggs can be killed by fountain pumps
- ⋈ Cats and dogs – protect the frog area of your garden with dense or spiky plants that will deter them
- ⋈ Pesticides and herbicides – frogs eat insects, so you don't want to spray them. Frogs are also very sensitive as they absorb moisture and oxygen through their skin, and the chemicals they may contain. For this reason, you should not handle frogs
- ⋈ Fertiliser runoff will pollute the pond water
- ⋈ Allowing duckweed or Azolla to cover the top of the pond will reduce the oxygen available to the tadpoles
- ⋈ Cleaning out the pond too often – tadpoles need some material to be breaking down in the pond water to provide food for them

Collecting tadpoles from the wild is illegal – the same rule applies for all native animals and plants.

Other wildlife friendly practices

- ❖ Maintain dead trees as they provide hollows for nesting or incorporate nest boxes if you don't have suitable hollows. Resist the desire to "tidy up" all fallen branches and leaves
- ❖ Reducing the use of pesticides in the garden will provide insect eating wildlife with a safe food source
- ❖ Securing cats and dogs, especially at night, so they don't prey on native animals. Work with your neighbours to make sure they also secure their cats and dogs
- ❖ Keep the telephone number of a wildlife rescue service handy and plug it into your mobile phone. RACV will connect you to the nearest relevant wildlife rescue service wherever you are in Victoria (Ph: 131 111)
- ❖ You don't need to (and shouldn't) provide shop bought / food scraps for wildlife. You can have a close encounter using nest boxes and water sources (e.g. birdbaths)

Photo: Emma Campbell (SYR)



Photo: Alex Maisey



Above left: Skink Right from top: Gang-gang Cockatoos enjoying a bird bath, Echidna, Sword-grass Brown Butterfly and bat box

FURTHER INFORMATION

Flora for Fauna – www.floraforfauna.com.au

Nesting boxes – www.latrobe.edu.au/wildlife/nestboxes

Vegetation Regulations

In Mitchell and Strathbogie, there are hundreds of Shire reserves and roadsides which have a cover of remnant bushland. Remnants of native vegetation are found on private properties, shelterbelts, reserves, parks, gardens, cemeteries, roadsides and along watercourses. Sometimes the roadsides contain the last fragments of bush, after clearing for towns, roads and farming.

The loss of areas of remnant vegetation leads to the following:

- :: The decline of natural ecological systems through the loss of wildlife habitat and depletion of the genetic diversity in plants and animals, which makes them more susceptible to attack and disease
- :: Reduced agricultural production, nutrient loss, soil erosion, silting, and pollution of waterways

Council recommends that you make contact before removing any native vegetation and to seek clarification on the exemptions, and avoid a fine.

If the plant is listed as an environmental weed in the Shire's Planning Scheme or is a State listed noxious weed, there is no permit requirement to remove, lop or destroy the plant. A list of Environmental Weeds is found on pages 51–52. Current noxious weed lists can be found on the Department of Primary Industries website (www.dpi.vic.gov.au)

All land owners are required by law to remove and/or control noxious weeds on their land. Penalties exist for not doing so.

These are some of the biggest threats to our natural environment:

- :: Illegal clearing (often incremental, one tree here and another there) of indigenous vegetation which is a breach of the Planning Scheme
- :: Illegal earthworks where cleared land can allow weed invasion or damage tree roots which could cause their death
- :: Illegal dumping, especially of green waste, which may contain weeds

If you see any of these illegal actions taking place, please contact your Shire and make a confidential report.

Roadside Vegetation

“Roadside vegetation and wildlife corridors are a significant feature of Mitchell Shire. Many roadsides and corridors throughout the area contain pockets of remnant indigenous vegetation, rare, vulnerable and significant flora species. Some of the roadsides and corridors provide a valuable source of native seed stock and important habitat for wildlife. The conservation and protection of these areas is an important strategy” (Mitchell Planning Scheme).

In order to maintain healthy, viable fauna populations it is essential that their habitat be protected and that they are able to move through the landscape. Corridors of native vegetation along roadsides provide necessary habitat and often vital pathways. You may even call them ‘roads’ for native wildlife.

Significant roadside reserves can be an extension of your garden attracting wildlife and allowing natural regeneration of indigenous species and proving a buffer between the garden and the road. Planting of roadsides may be permitted in some circumstances; however permission must be sought from your Council before doing so.

Environmental weeds must not be planted on road reserves.

Like all native vegetation, the vegetation on roadsides is protected by National, State and Local legislation. This means that the vegetation cannot be damaged or removed without an appropriate approval or permit from your Council.



Healthy Soil

Healthy soil = healthy plants. Soil needs organic matter (leaf litter, compost, manure, grass clippings). Worms break down organic matter to make food for plants, and worm burrows allow air into the soil so that plant roots can breathe. Organic matter needs to be replaced as plants absorb nutrients. If organic matter is not added, the soil becomes hard, like concrete, in the summer and a sticky mess in the winter. In addition, most people want a low maintenance garden. This is much easier to achieve if you look after your soil.

SOIL IMPROVEMENT TIPS

- ⌘ Soil should be damp before you add mulch, generally spring is the best time to apply mulch, once the winter rains have soaked in
- ⌘ Mulches made from recycled organics are an excellent choice as they save water, are long lasting and feed the soil when they break down. Mulch should be applied 50–75mm deep, and will need to be topped up every year
- ⌘ Avoid mulch from rare forest types like Red Gum or Jarrah. Pea straw and Lucerne are good options if you have not mulched the soil for a long time as they break down quickly, returning nutrients to the soil – excellent for the vegie garden
- ⌘ When buying new soil for your garden don't just buy topsoil, buy a soil that is mixed with recycled organics or compost. 2/3 soil to 1/3 compost is ideal
- ⌘ Soil improvement is generally only required for exotic plants, vegetables and fruit trees. Most local and native plants like a relatively infertile soil so they prefer a bush mulch or recycled timber mulch on its own without soil improvement
- ⌘ Don't cultivate your soil unless it is very compacted after building works. Digging destroys the soil structure, which thereby destroys air holes and drainage spaces
- ⌘ When watering use a trigger hose with a spray setting so as not to compact the soil as the water hits. The concentrated pressure of the water stream can close up valuable air spaces



Soils in Mitchell and Strathbogie

The soil types across Mitchell and Strathbogie Shires vary enormously - from the deep, well-drained fertile soils of the Southern Fall Highlands, to the slightly acidic heavy clay soils found across in many other parts of the region (see "Bioregions", page 4). As a home gardener, knowing your soil type, soil pH and the history of your soil can be extremely helpful, and can help you do the right things to help your garden thrive.

One characteristic common to most soils across the region is the high portion of clay, which can result in waterlogged soils over winter, and dry, hard soils over summer. To help your garden thrive, start by improving the soil in the area you are working in by:

- ⌘ Using a garden fork to improve drainage and alleviate compaction
- ⌘ Applying a light dusting of gypsum to the area every six to 12 months.
- ⌘ Using organic matter like compost to improve the soil, and top this up regularly
- ⌘ Mulching - this will improve the soil, and prevent it from drying out
- ⌘ Planting deep-rooted annual crops (like green manures) to improve soil structure and add nutrients to soil

WARNING - Cinnamon Fungus in Mitchell and Stratbogie

Phytophthora cinnamomi (commonly known as Cinnamon Fungus) is an introduced water mould that attacks the root systems of susceptible native plants, (as well as many exotic and garden species), leading to "root rot" and "dieback" in affected plants. It poses a significant threat not just to native plants, but to the ecosystems of which they form part of and the animals that depend on them.

Warm, wet soils with poor drainage (typical to many parts of our Shires) are favoured by this fungus, and because of this, many bushland areas within Mitchell and Strathbogie have already been negatively impacted. You can help stop the spread of Cinnamon Fungus into our precious remnant bushland in the following ways:

- ⌘ Do not dig up soil or plants from the bush
- ⌘ Never dump soil, plants or garden waste in the bush - compost at home, or take it to the tip
- ⌘ If bushwalking, keep your bushwalking gear clean and between walks wash your boots, gaiters etc in water with a little soap and rinse off
- ⌘ Clean and sanitise tools, machinery, boots and tyres that have been in contact with soil
- ⌘ Avoid transporting plants and soil into or out of an infected area

Compost

Composting or worm farming your food scraps, grass and garden clippings (organics) can provide you with an excellent source of free garden food and soil improver. In addition to creating great fertiliser, it reduces greenhouse gases, saves water and dramatically reduces the amount of waste going to landfill.

ADD TO YOUR COMPOST

- fruit and vegetable scraps
- coffee grounds
- tea bags
- egg shells
- onions
- citrus fruit (cut up)
- pizza and egg cartons
- vacuum cleaner dust
- animal fur
- pure wool jumpers, socks and pure cotton articles (cut up)
- pure cotton articles (cut up)
- grass clippings
- cut up prunings
- weeds without seed heads
- blood and bone
- shredded newspaper

DO NOT ADD TO COMPOST

- fish and meat scraps
- cat and dog droppings
- big woody prunings
- bulbous weeds – e.g. oxalis
- weeds with runners (eg: kikuyu)
- bleached or glossy paper

COMPOSTING TIPS

:: Your compost bin or heap should be located on soil, so that it drains well and worms and bacteria can enter the bin to decompose the waste.

:: All compost bins or heaps need a balance of materials that:

- Are high in nitrogen, such as blood and bone, organic pelletised fertilisers or chicken manure. Kitchen scraps and grass clippings also contain nitrogen.

- Contain carbon, such as dried leaves or shredded newspapers.

- Aim for a ratio of 30 parts carbon (brown): 1 part nitrogen (green).

:: In addition, the compost heap or bin needs:

- Water – enough so that the contents are moist but not wet.

- Oxygen – added by regularly turning over the contents.

- Warmth – locate your compost bin in sunny place, but not with direct sunlight all day.

SOLVING COMMON COMPOST PROBLEMS

WHY IS MY COMPOST:

Left with half decomposed big lumps?

Adding smaller pieces to the bin/heap should ensure that it all decomposes evenly. Avoid avocado seeds, pineapple tops, twigs and other woody items unless they can be crushed or chopped before adding. Always crush eggshells.

Smelly?

Either: Too much nitrogen containing matter and not enough carbon i.e. add more dry materials such as dried chopped up leaves and newspaper.

or

Make sure you aid decomposition by using a garden fork and turn over the bin/heap occasionally (maybe once a week) to introduce more air. This prevents anaerobic bacteria from taking over and producing the smells. In a compost bin you can add lengths of slotted agipipe to increase aeration.

Crawling with ants and slaters?

The heap is too dry. Add a sprinkling of water or less dry matter. Ants and slaters are not harmful, however they do indicate that your compost will not decompose fast enough.

Attracting flies?

If you see tiny flies (*Drosophila* spp.) every time you open the lid, rest assured that they are there because they enjoy the contents of your bin/heap, especially if you have been adding fruit peelings. Add a blanket cover to the contents of your bin/heap, such as hessian sacking or carpet felt underlay.

Visited by rats, mice, blowflies or maggots?

Meat scraps or fish bones can be added to compost but only if it is working effectively. They are best avoided since they do encourage vermin, especially over summer. Rats and mice enter the bin by digging underneath, so fasten a piece of fine mesh wire under the bin.



Taking so long to do anything?

The carbon/nitrogen ratio needs to be altered. Remember: too wet, add dry matter, such as newspaper; too dry, add water along with something high in nitrogen such as blood and bone, organic pelletised fertilisers, or chicken manure. And don't forget to regularly turn the heap over!

Worm Farming

Keeping worms in worm farms and feeding them organic matter is an excellent way to reduce the amount of organic waste you place into your garbage bin, decreasing the amount of waste sent to landfill. Worms produce a rich inexpensive garden fertiliser, called castings (poo) and worm tea (wee), that is great for your garden. Worm farms are ideal for people living in flats or houses with small backyards. They can be purchased from garden centres and hardware stores and come with instructions, bedding material and a box of worms. There are specific composting worms that eat food scraps only and are different to the earthworms that you find in your garden. Composting worms include Tiger Worms, Red Wigglers and Indian Blues.



KEEP YOUR WORMS HAPPY

Moisture – worms need to keep their skin cool and moist to breathe. Keep a few layers of moist newspaper over the top of your worms before placing a lid on your worm farm. Do not flood your worms and take care not to leave your worm farm uncovered if it rains. If your worm farm is too wet you may have huge numbers of small vinegar flies (a small amount are healthy). Likewise if you find worms drowned in the worm tea at the bottom of your worm farm your system is too wet. Add some torn up newspaper to absorb the excess moisture.

Temperature – worms stop eating if they are cold and will die if they are too hot. They like a temperature between 18-24°C so it is important to keep your worms in a shady place out of direct sunlight in summer and warm in winter.

Food – worms may not eat for the first few weeks after introduction and then slowly build their appetite. If you are adding more food than the worms can eat your worm farm may become smelly as the food is rotting. Be sure to monitor and adjust the amount of food you are giving your worms. If your worm farm is attracting rats and mice you are adding the wrong foods.

USING YOUR CASTINGS AND WORM TEA

Castings can be mixed directly into the soil around your plants or before you add seedlings to the soil. Worm tea is a strong nutrient boost for your plants and needs to be diluted 1:10 in water before you add to your plants.

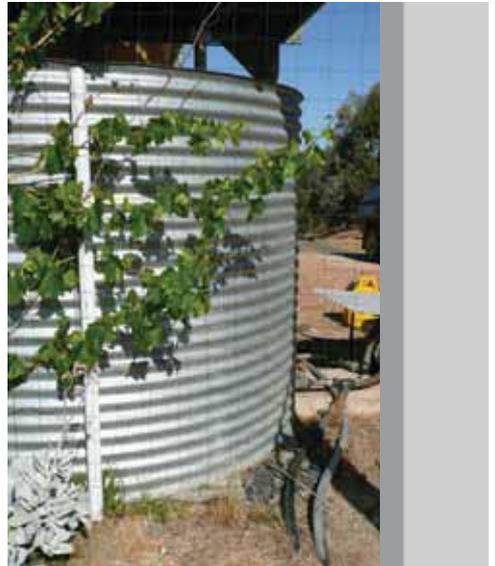
Saving Water In The Garden

Australia is one of the driest continents on earth. In Victoria, it has been predicted that our water demands will exceed our supply within 15 years. Water use in the garden is a major contributor to high water consumption levels throughout Mitchell and Strathbogie Shires.

By improving the soil and using alternative water sources for the garden such as rain water collected in tanks, storm water directed into the garden, greywater, and installing efficient irrigation systems along with good garden design, significant water savings can be made.

WATER TIPS

- ❖ Plant local native indigenous plants or other non weed, drought tolerant species and lawn to reduce water use and maintenance
- ❖ Water the base of plants, not the leaves and use mulch to reduce evaporation and run-off
- ❖ Use a drip watering system or porous hose which cuts wastage by ensuring that the water only goes where it is needed
- ❖ Avoid micro-sprays. They waste up to 70% of the water through drift and evaporation and if the soil is mulched, water will not penetrate the soil
- ❖ Check and clean your irrigation system every spring
- ❖ Position irrigation systems so that water isn't wasted on paths, patios, driveways and buildings
- ❖ Install garden tap timers to reduce over-watering
- ❖ Use a rain sensor in your garden so that watering doesn't occur automatically when it is wet
- ❖ Check the weather forecast to avoid watering before rain



Greywater Reuse

Greywater is domestic wastewater which can be used as supplementary irrigation in your garden, provided precautions are taken. The best quality greywater comes from the rinse water of your washing machine, bath or shower. Toilet and kitchen wastewater is classified as blackwater, and should always go to sewer or onsite septic.

Greywater can contain a number of micro-organisms such as bacteria and viruses as well as chemicals from cleaning agents, so be careful to follow the tips recommended below.

DOs

- ⌘ Only use wastewater from baths, showers, hand basins and washing machines (final rinse water)
- ⌘ Only use low phosphate and low sodium detergents, and avoid powders
- ⌘ Only use greywater on the garden and rotate the areas you water
- ⌘ Only apply water that the soil can absorb

DON'Ts

- ⌘ Water vegetable gardens with greywater if the crop is to be eaten raw
- ⌘ Use greywater that has any faecal contamination, for example wastewater used to launder nappies
- ⌘ Use kitchen wastewater (including dishwashers) due to high concentration of food wastes and chemicals
- ⌘ Store greywater for more than 24 hours
- ⌘ Let children or pets drink or play with greywater
- ⌘ Allow greywater to flow from your property or enter stormwater systems



Above: All water from the shower and the laundry is piped into a greywater system, which returns it to the toilet cistern for flushing.



Above: The capacity of this system is about 150 litres. What isn't used in the toilet is pumped automatically onto the garden once daily.

Use soaps, shampoos and detergents that are free of animal products (reducing greasy waste) and phosphorous (better for garden plants).



Above: Perforated hose is attached to the greywater system and run around the well-mulched garden. These pipe should be laid below the surface at a 2% slope (2cm drop per metre) to provide the safest way of using greywater, a more efficient way to irrigate and reduces evaporation.

The images above are reproduced courtesy of Museum Victoria.

Using Pesticides, Herbicides and Fertilisers

Chemicals and fertilisers can be transferred from our home gardens to the natural environment. Chemical sprays can drift in the wind and powders can wash into waterways. Strong chemicals can kill native insects, plants and animals. The application of too much fertiliser can lead to extra nutrients in our waterways, contributing to blue-green algae outbreaks that can harm native animals, stock and sometimes people.

TIPS FOR SAFER CHEMICAL USE

- ∴ Prevention is better than cure! Check your garden regularly for pest and disease outbreaks. If problems are spotted early enough you might be able to avoid chemicals altogether
- ∴ Many insects in the garden such as ladybirds are 'good guys' that will eat pests such as aphids. If you over use chemicals in your garden you may also kill beneficial insects and make your pest problem harder to control. Multi-sprays will kill anything they touch

Below: An Australian native fungus-eating ladybird, *Illeis galbula*.





Above: A Southern Brown Tree Frog (left) and a Spotted Marsh Frog (right) found in domestic gardens. (Note: it is not a good idea to handle frogs in this way as there may be a risk of infection to the frog from your skin.)

- ∴ Use natural alternatives such as pyrethrum and garlic spray to control pests
- ∴ Too much fertiliser makes plants produce a lot of leafy growth that often becomes a target for pests
- ∴ Organic fertilisers such as compost, manures, seaweed and fish emulsion break down more slowly than synthetic (chemical) fertilisers and generally match the rate at which plants need the nutrients. Synthetic fertilisers break down quickly and can 'burn' plant roots
- ∴ Organic fertilisers (such as blood meal, fish emulsion and manure) improve soil structure while synthetic fertilisers (such as ammonium sulphate, ammonium nitrate and urea) add nothing to the soil structure and tend to move easily from the soil after heavy rain or watering
- ∴ When a plant looks sick the worst thing you can do is feed it
- ∴ Clean your secateurs between pruning plants, to prevent the spread of disease
- ∴ Use natural alternatives such as pyrethrum and garlic spray to control pests
- ∴ Too much fertiliser makes plants produce a lot of leafy growth that often becomes a target for pests
- ∴ Organic fertilisers such as compost, manures, seaweed and fish emulsion break down more slowly than synthetic (chemical) fertilisers and generally match the rate at which plants need the nutrients. Synthetic fertilisers break down quickly and can 'burn' plant roots

Plant Selection

Careful plant selection can be the key to creating a sustainable garden that enhances your local environment, provides the desired look and function of your garden and has a maintenance regime suitable to your lifestyle.

We recommend you visit the indigenous and community nurseries in the Shires to get good local advice on plant selection.

Local markets and community fetes can be a good, inexpensive source of indigenous plants but be aware that these sellers are unregulated and may not have the most current information on what plants are weeds and are suitable for sale. Indeed, by their very nature, weedy plants are easy to propagate and grow and make easy options for home propagation for sale at local markets.

As with purchasing in nurseries, we recommend you take this booklet along to markets and fetes when you are planning to purchase plants, just to be sure your bargain is not at the expense of the environment.

Below: The gorgeous flowers of Grevillea 'Misty Pink' and Eucalyptus 'Silver Princess'



THINGS TO CONSIDER WHEN CHOOSING PLANTS

- ∴ **Is it a known environmental weed in Mitchell or Strathbogie?** Many weeds are originally planted as garden plants and many are still available for sale. Take this booklet to the nursery with you when choosing plants and use the list of environmental weeds on pages 50-56 as a reference.



- ∴ **Is it an indigenous plant to your Shire?** The use of indigenous, or locally native, plants is strongly encouraged as they will increase the environmental value of any garden and reduce the effort you need to invest to make your garden a success. This booklet will serve as a preliminary reference for planning your plant list. For a more detailed indigenous plant list please see 'Further Information' at the back of this booklet.

- ∴ **Is it low water use?** While all plants take some watering to become established, choose plants that do not require on-going intensive watering. Double check these against the weed list keeping in mind many Mediterranean plants sold as water wise can also be weedy.

- ∴ **Does it provide the function you want it to?** Do some investigation into the mature size and shape of a plant to determine it's most appropriate placement and if it will provide the right function (screening, bird-attracting, feature etc.) Take into consideration the seasonality of a plant as the ability of it to provide that function may change throughout the year. Try and select a range of plants that will provide fast and slow growing components to your garden to provide a more immediate as well as a long-term effect.
- ∴ **Is the plant suited to the site's environmental conditions?** For example, is it shade tolerant, does it require full sun, what type of soil is it best suited for, can it handle water logging or long periods of drought? There are indigenous plant options available for all situations.

Above left: Sweet Bursaria (*Bursaria spinosa*) in a hedging trial. With a bit of creativity, many indigenous plants can be used successfully instead of introduced species.

Indigenous Plants Guide

The following list of plants provides a small snapshot of the range suitable for Mitchell and Strathbogie gardens, as they grow within the region naturally and provide habitat for native wildlife. Indigenous plants are also the most waterwise plants for your garden as they have adapted to the local climate and soil conditions so require less maintenance.



Some of these plants provide habitat for:



butterflies



birds



frogs



lizards

Grasses, Rushes and Sedges (HxW)



Common Tussock Grass

(*Poa labillardierei*)

(50cm x 1.2m)

Flowers Spring–Summer



Pale Flax-lily

(*Dianella longifolia*)

(50cm x 1.5m)

Flowers Spring–Autumn



Spiny-headed Mat-rush

(*Lomandra longifolia*)

(50cm x 1.5m)

Flowers Spring–Summer



Tall Sedge

(*Carex appressa*)

(50cm x 1.5m)

Flowers Spring–Autumn



Wildflowers (HxW)

Blue Pincushion
(*Brunonia australis*)
(10cm x 2.5m)
Flowers Summer



Bulbine Lily
(*Bulbine bulbosa*)
(40cm x 30cm)
Flowers Spring-Summer



Chocolate Lily
(*Arthropodium strictum*)
(80cm x 80cm)
Flowers Spring -Summer



Clustered Everlasting
(*Chrysocephalum semipapposum*)
(50cm x 1.5m)
Flowers Summer-Autumn



Common Everlasting
(*Chrysocephalum apiculatum*)
(60cm x 90cm)
Flowers Summer-Autumn



Rock Isotome
(*Isotoma axillaris*)
(50cm x 60cm)
Flowers Spring-Autumn



Showy Podolepis
 (*Podolepis jaceoides*)
 (60cm x 30cm)
 Flowers Spring-Summer



Trigger Plant
 (*Stylidium graminifolium*)
 (75cm x 30cm)
 Flowers Late Winter-Early Summer



Yam Daisy
 (*Microseris lanceolata*)
 (40cm x 25cm)
 Flowers Summer-Autumn



Climbers and Creepers (HxW)

Creeping Bossiaea
 (*Bossiaea prostrata*)
 (1m x 1.5m)
 Flowers Spring



Running Postman
 (*Kennedia prostrata*)
 (10cm x 2m)
 Flowers Autumn-Summer



Purple Coral Pea
 (*Hardenbergia violacea*)
 (10cm x 2m)
 Flowers Spring-Summer



Shrubs (HxW)

Alpine Grevillea

(*Grevillea alpina*)

(1.5m x 1.5m)

Flowers Spring-Summer



Photo: D Allen



Photo: Kelly Castelletti

Austral Indigo

(*Indigofera australis*)

(1.5m x 1.5m)

Flowers Spring



Chamomile Sunray

(*Rhodanthe anthemoides*)

(60cm x 60cm)

Flowers Winter–Early Autumn



Common Correa

(*Correa reflexa*)

(60cm x 1.5m)

Flowers Autumn–Winter



Grey Everlasting

(*Ozothamnus obcordatus*)

(1-2m x 1m)

Flowers Spring–Summer



Grey Parrot Pea

(*Dillwynia cinerascens*)

(1.5m x 1.5m)

Flowers Winter–Late Spring



Hop Goodenia
 (*Goodenia ovata*)
 (1.8m x 1.5m)
 Flowers Winter–Summer



Rock Correa
 (*Correa glabra*)
 (1-3m x 1-3m)
 Flowers Autumn-Winter



Smooth Parrot Pea
 (*Dillwynia glaberrima*)
 (1.5m x 1.5m)
 Flowers Late Winter-Summer



Sticky (Wedge-leaf) Hop Bush
 (*Dodonaea viscosa*)
 (3m x 1.5m)
 Flowers Late Winter-Summer



Trees (HxW)

Drooping Sheoak
 (*Allocasuarina verticillata*)
 (5-10m x 6m)
 Flowers Winter



Golden Wattle
 (*Acacia pycnantha*)
 (8m x 3.5m)
 Flowers Winter–Spring



River Bottlebrush
(*Callistemon sieberi*)

(2-3m x 2m)

Flowers Spring–Summer



Rough-barked Honey-myrtle
(*Melaleuca parvistaminea*)

(4m x 5m)

Flowers Spring-Summer



Silver Banksia

(*Banksia marginata*)

(1-7m x 4m)

Flowers Autumn-Early Winter



Swamp Paperbark
(*Melaleuca ericifolia*)

(4-9m x 2-6m)

Flowers Spring



Sweet Bursaria

(*Bursaria spinosa*)

(3.5m x 2.5m)

Flowers Summer



Woolly Tea-tree

(*Leptospermum lanigerum*)

(3m x 3m)

Flowers Spring-Summer



Native Plants in Mitchell and Strathbogie

The following list of species make great plants for Mitchell and Strathbogie gardens as they grow within the Shires naturally, and provide habitat for native wildlife.

Common Name	Botanical Name	Form
Weeping Grass	<i>Microlaena stipoides</i>	Alternative lawn
Small-leaved Clematis	<i>Clematis microphylla</i>	Climber
Creeping Boobialla	<i>Myoporum parvifolium</i>	Creeper
Spreading Bluebell	<i>Whalenbergia gracilis</i>	Creeper
Kangaroo Grass	<i>Themeda triandra</i>	Grass
Silver Wallaby Grass	<i>Joycea pallida</i>	Grass
Austral Indigo	<i>Indigofera australis</i>	Shrub
Daphne Heath	<i>Brachyloma daphniodes</i>	Shrub
Fringe Myrtle	<i>Calytrix tetragona</i>	Shrub
Gorse Bitter-pea	<i>Davesia ulicifolia</i>	Shrub
Showy Parrot Pea	<i>Dillwunia sericea</i>	Shrub
Sweet Bursaria	<i>Bursaria spinosa</i>	Shrub
Black-anther Flax-lily	<i>Dianella revoluta</i>	Strap Foliage
Wattle Mat-rush	<i>Lomandra filiformis</i>	Strap Foliage
Gold Dust Wattle	<i>Acacia acinacea</i>	Tree
Hazel Pomaderris	<i>Pomaderris aspera</i>	Tree
Ovens Wattle	<i>Acacia pravissima</i>	Tree
Prickly Moses	<i>Acacia paradoxa</i>	Tree
Prickly Tea-tree	<i>Leptospermum continentale</i>	Tree
Wirilda	<i>Acacia retinoides</i> var. <i>retinopides</i>	Tree
Wooly (Hairy) Wattle	<i>Acacia lanigera</i> var. <i>whanii</i>	Tree
Fuzzy New Holland Daisy	<i>Vittadinia cuneata</i>	Wildflower
Shiny Everlasting	<i>Bracteantha viscosa</i>	Wildflower
Showy Everlasting	<i>Schoenia filifolia</i> ssp. <i>subulifolia</i>	Wildflower
Blue Finger Flower	<i>Cheiranthra cyanea</i>	Wildflower
Cut-leaf Daisy	<i>Brachyscome multifida</i>	Wildflower
Sticky Everlasting	<i>Xerochrysum viscosum</i>	Wildflower
Milkmaids	<i>Burchardia umbellata</i>	Wildflower

Common Garden Weeds

All the plants listed in the left column of this section are weeds that have escaped from gardens in Mitchell and Strathbogie into surrounding bushland. Even native plants from other regions can become weeds. They may be found for sale in nurseries, community markets or fetes. Please do not plant these species. If you have them in your garden, we encourage you to remove them. Further advice on how to remove them is available from your Shire. They can be replaced with one of the suggested similar non-invasive native plants listed in the right column.

Weed



Blue Periwinkle
(*Vinca major*)



Bridal Creeper
(*Asparagus asparagoides*)



LHS photo STR

English Ivy/ Cape Ivy
(*Hedera helix* / *Delairea odorata*)



Replacement



Purple Coral Pea
(*Hardenbergia violacea*)



Small-leaved Clematis
(*Clematis microphylla*)



Creeping Boobialla/Boobialla
(*Myoporum parvifolium* / *M. insulare*)



Weed **X**

Morning Glory Vine
(*Ipomoea indica*)



Wandering Tradescantia
(*Tradescantia fluminensis*)



Asparagus Fern
(*Asparagus scandens*)



Gazania
(*Gazania linearis*)



Fountain Grass
(*Pennisetum setaceum*)

Replacement **✓**

Large Bindweed
(*Calystegia sepium*)



Ivy-leaf Violet
(*Viola hederaceae*)



Maidenhair Fern
(*Adiantum aethiopicum*)



Cut-leaf Daisy
(*Brachyscome multifida*)



Wallaby Grass
(*Austrodanthonia* spp.)



Weed



Spanish Heath
(*Erica lusitanica*)



Agapanthus
(*Agapanthus* spp.)



Pampas Grass
(*Cortaderia* spp.)



Bulbil Watsonia
(*Watsonia meriana* var. *bulbillifera*)



Cotoneaster
(*Cotoneaster* spp.)



Replacement



Common Heath
(*Epacris impressa*)



Photo: Kelly Castelletti

Black-anther Flax-lily
(*Dianella revoluta*)



Spiny-headed Mat-rush
(*Lomandra longifolia*)



Tasman Flax-lily
(*Dianella tasmanica*)



Lilly Pilly
(*Acmena smithii*)





English Broom
(*Cytisus scoparius*)



Flax-leaf Broom
(*Genista linifolia*)



Hawthorn
(*Crateagus monogyma*)



Mirror Bush
(*Coprosma repens*)



Gold Dust Wattle
(*Acacia acinacea*)



Golden Spray
(*Vimincia juncea*)



Snowy Daisy-bush
(*Olearia lirata*)



Victorian Christmas Bush
(*Prostanthera lasianthos*)





Cootamundra Wattle
(*Acacia baileyana*)



Desert Ash
(*Fraxinus angustifolia*)



Photos: Caroline Carvalho

Monterey Pine
(*Pinus radiata*)



Useful Links

- **Weeds Australia** – www.weeds.org.au
- **Department of Primary Industries website** – www.dpi.vic.gov.au and click on Victorian Resources Online/Land and Water Management/Invasive Plants/Full Listing of Weeds
- **Department of Primary Industries website** – www.dpi.vic.gov.au and click on Agriculture/Crops, Pasture and Weeds/Weeds
- **Weeds of National Significance** – www.weeds.gov.au/weeds/lists/wons
- **Catchment and Land Protection (CaLP) Act** – www.austlii.edu.au/au/legis/vic/consol_act/calpa1994267
- **The Weed Society of Victoria** – www.wsvic.org.au



Golden Wattle
(*Acacia pycnantha*)

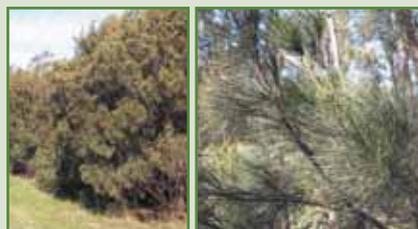


Blackwood
(*Acacia melanoxylon*)



Photo right: Shire of Yarra Ranges

Black Sheoak
(*Allocasuarina littoralis*)



Environmental Weed List for Mitchell and Strathbogie

A weed is a plant that establishes itself outside its normal environment and thrives. A weed can either be introduced from overseas, or a native plant that is growing in the wrong place and flourishing.

One of the greatest threats to our native flora and fauna, and agricultural productivity results from weed invasions. Environmental weeds threaten the values of natural ecosystems by invading native plant communities and out-competing them. The result is a reduction in plant diversity and loss of habitat for animals and birds. Agricultural weeds threaten sustainable productivity, and some are toxic to humans and stock.

SOME WEED FACTS:

- ⋆ The cost of weeds to agriculture in Australia is estimated to be \$4 billion annually (in lost production and eradication efforts)
- ⋆ Weeds cause serious problems to economy, environment, human and animal health, biodiversity, eco-tourism, water quality, recreation, amenity, landscape, and can be a fire hazard
- ⋆ It is estimated that 65% of weeds introduced to the Australian landscape are “escapees” from urban gardens and parks
- ⋆ Six of Australia’s worst invasive plants have degraded over 20 million hectares of grazing and natural lands

Weeds on private properties can spread into the bushland via stormwater run-off, wind and birds. To help keep our bushland reserves looking attractive and to minimise weed cover, please keep your property free of environmental and noxious weeds. You can also:

- ⋆ Reduce stormwater run-off from your property
- ⋆ Reduce fertiliser use in the garden as it can promote weeds and discourage native plant growth
- ⋆ Grow native plants instead of exotics
- ⋆ Avoid dumping garden waste (including grass clippings) into bushland

Many of our worst weeds have come from the garden by jumping the back fence and establishing in our waterways and bushland. Birds and foxes eat the fruits of plants such as Cotoneaster and Privet, which they can carry kilometres away. Seeds also blow long distances in the wind and wash down drains into waterways, where they grow and spread.

Produce Gardening

Growing fruit and vegetables commercially uses a large amount of energy and chemicals for heating, cooling, spraying weeds and pests and for transporting produce. Fruit and vegetables begin to lose their vitamins as soon as they're picked. After five days some have lost 40–50% of vitamins. Growing your own vegetables is so easy, and even easier if you've improved your soil. They're healthier, convenient and children love to watch them grow. Even if you only grow tomatoes, herbs and lettuce in a pot, it's a great start!

Most of the vegies, herbs and fruits we like to grow require a few basics - full sun (about 6 hours a day), rich, free-draining soils, organic matter (compost and mulch) and plenty of water over their growing period.

One of the easiest ways to get started with growing your own produce is to buy or build a raised garden bed. An excellent option in areas with poor soils, raised garden beds are easily accessible to people of all mobilities, and allow you to get growing sooner.



HOW TO BUILD A RAISED NO DIG GARDEN ON EXISTING LAWN OR ONTO SOIL:

1. Choose a level, sunny spot protected from wind and heavy frost.
2. Mark out and form walls of no-dig garden. The walls should be at least 30cm high, but may be a lot higher. You can use anything including old rocks or sleepers or bricks, blocks, pavers etc.
3. Line the base with at least 6mm thickness of newspaper or cardboard (not waxed) to suppress weeds; and wet thoroughly. Make sure this overlaps, to prevent weeds and grass from poking through. If the soil below is heavy clay, dust the surface with gypsum prior to laying the newspaper.
4. For a no-dig patch, stack alternating layers of fine and coarse compostable materials. Start with a 6cm layer of organic compost, then a 6cm layer of pea straw, then a layer of aged cow manure, and then another 6cm of pea straw. Repeat the layers finishing with a thick compost layer.
5. Planting can be done into the top compost layer.
6. Mulch well around your seedlings with pea straw (remembering to keep the mulch away from the stem of the plants) to a depth of about 6cm.

7. Due to the high level of compostable, organic material, you will notice that the level of the growing media in your no-dig bed will drop considerably over time. Top up layers as they rot down. This is best done at the change of seasons (eg: Autumn and Spring).

You can also build a no-dig garden in a large container, simply do the same as above, but omit step 2.

WHAT TO PLANT WHEN

Spring

Vegies: tomatoes, cabbage, celery, leeks, lettuce, silverbeet, spring onions, Brussels sprouts, capsicums, eggplants, and beetroot.
Herbs: parsley, chamomile, oregano, pyrethrum, rue, sage, rosemary, thyme, lemon balm and mint.

Summer

Vegies: leek, sweet corn, beans, cucumber, spring onions and zucchini.
Herbs: basil, parsley, watercress, sage, dill, lemongrass, lemon balm and mint.

Autumn

Vegies: Chinese cabbage, Asian Greens, spinach, rocket, broccoli, spring onions, celery, onions, silverbeet, leeks, carrots and lettuce
Herbs: parsley, lemon grass, chamomile, coriander and oregano

Winter

Vegies: lettuce, celery, broad beans, peas, Jerusalem artichokes, potato, garlic, radish and spinach
Herbs: coriander, chamomile and nasturtium

COMPANION PLANTING

Companion planting is a method of growing plants together, with the idea that they will assist each other in some way, like deterring pests, improving growth, enhancing flavour, attracting beneficial insects, fixing nitrogen, disrupting “patterns” and trap cropping. When planning and planting your produce garden, it is important to consider the biodiversity required to keep things problem free.

Companion plants don't have to be herbs or even edible - some locally native plants near the produce garden is great! Aim to plant a garden that is never without blossom, and is therefore never without the array of critters that come with that:



birds, pollinating insects (like butterflies, bees, and native wasps), reptiles, beetles and all sorts of helpful garden buddies. Attracting the good guys will keep the pests and problems at bay! For a comprehensive list of companion plants for produce gardens, visit www.sgaonline.org.au

PRODUCE GARDENING TIPS

- ⌘ We strongly recommend that CCA treated pine and recycled railway sleepers not be used in vegetable gardens as some chemicals may leach into the soil over time
- ⌘ Rotate the position of vegetables in your garden every year to stop diseases from spreading
- ⌘ Use natural alternatives such as pyrethrum and garlic sprays to control pests. Remember to check for pests regularly, and keep an eye out for snails on young seedlings
- ⌘ You will need to apply regular water to your produce garden particularly annual vegetables and herbs. Consider alternate sources of water, like a rainwater tank, to sustain your garden over dry periods
- ⌘ Use heritage seeds (these are from plants with historical importance) for more variety and often superior flavour. Search for open pollinated, non-hybrid seed varieties - these will allow you to save and store seeds from one season to the next
- ⌘ Feed your produce garden with organically derived products, like compost, worm wee, seaweed based products and organic fertilisers

Sustainable Lawns

Traditional turf lawns are often high water users. If you are looking for an attractive lawn alternative, that can withstand periods of low water supply and less ongoing maintenance, you could consider a range of native grasses, depending on the look you are trying to achieve.

- ∴ One of the most successful indigenous grasses for creating the look of a traditional lawn is Weeping Grass (*Microlaena stipoides*). Unmown it grows up to 30cm, but mown a few times a year will grow well in a wide range of soils and provide a lawn look. Once established, Weeping Grass is drought, frost and shade tolerant. It is excellent for a front lawn and can be grown from seed or plugs (seedlings in bulk trays). Like any lawn, use edging to separate garden beds from lawns to reduce your maintenance efforts. For heavy traffic areas opt for paths
- ∴ If you like clumps of tussocky grasses then Kangaroo Grass (*Themeda triandra*), Wallaby Grass (*Austrodanthonia* spp.) and Tussock Grass (*Poa* spp.) are great alternatives

Below: Wallaby Grass (*Austrodanthonia* spp.) used as a lawn



- ∴ Use groundcover plants that form dense mats, don't require mowing and perform well in shade. Examples include: Kidney Plant (*Dichondra repens*), Creeping Boobialla (*Myoporum parvifolium*) and Native Mint (*Mentha diemenica*)
- ∴ Planting out a mass of native wildflowers to create a meadow look can be spectacular particularly in spring and summer. This works particularly well as a front lawn alternative. Examples include: Tall Bluebells (*Wahlenbergia stricta*), Grass Trigger-plant (*Stylidium graminifolium*), Bulbine Lily (*Bulbine bulbosa*) and Climbing Saltbush (*Einadia nutans*)



Use of instant turf should be avoided as it has higher water and chemical application requirements during establishment, and tends to contain weedy grass species like Couch and Kikuyu.

There are exotic tussock grasses that are non-invasive, grow well in shade or high use areas, are all deep rooted, or have a short rhizome to allow them to recover from dry periods. Examples include: Fescues, Blue Grass and Bent Grass.

While indigenous grass lawns require more effort in the establishment phase with hand weeding, once established they can provide a hardwearing, attractive lawn that won't invade bushland or garden beds, and requires less overall maintenance than an exotic grass lawn.

Above right: Weeping Grass (*Microlaena stipoides*) Below (left to right): Kangaroo Grass (*Themeda triandra*); Creeping Boobialla (*Myoporum parvifolium*); mixed wildflowers and native grasses



Sustainable Garden Products

When we buy products for the garden we often don't think about where they have come from. For example, Red Gum firewood and garden sleepers come from threatened woodland ecosystems (or vegetation communities) that support sensitive native fauna. Red Gum timber is also used to produce items such as bark chips, tomato stakes and railway sleepers – harvesting this product is unsustainable. And huge amounts of shiny river pebbles are dug out of active rivers in Asia so we can create a garden feature.



Using recycled materials such as second-hand bricks and timber looks great in a garden and it's a good practice to adopt! Recycled plastic garden materials are also available now, such as sleepers, decking boards and garden furniture.

Left: Wood-look recycled plastic garden seat – sourced from residential kerbside collections.

ALTERNATIVE PRODUCT TIPS

- ⌘ There are usually alternative garden products available. For example, pebbles that are quarried in Victoria from inactive streambeds are preferable because they are not destroying living habitats
- ⌘ Look up www.timbershop.org to find out which timbers are sustainable. While many outdoor furniture companies claim that Teak is plantation harvested in Asia, this magnificent tree is a rare rainforest plant that cannot be grown in plantations
- ⌘ Plants such as grass trees, tree ferns and native orchids may have been sourced illegally from the forest. When purchasing these plants look for a government tag stating that they have been legally collected
- ⌘ Make sure you ask where mulch has come from as some varieties are sourced from the logging of old growth forests and others may contain weed seeds
- ⌘ Ceramic pots fired using gas and produced locally have a lower environmental impact than those pots fired using coal or wood and transported from overseas. Ask where a product comes from and avoid buying unsustainable products

Mulch

Mulch should be applied to all garden beds to assist in controlling weeds and retaining moisture to sustain plants. Various types of leaf litter or wood chip mulches are available, but ones that are sourced from less abundant tree species (such as Red Gum) should be avoided.

Here are some appropriate mulches:

- ⌘ Recycled garden waste (see below)
- ⌘ Plantation grown timber (pine bark)
- ⌘ Sawmill off-cuts (e.g. eucy-mulch)
- ⌘ Recycled timber
- ⌘ Jute mat
- ⌘ Pebbles or scoria

Note: It is highly recommended that all weeds, in particular perennial weeds such as Couch Grass, Kikuyu and *Oxalis*, be controlled before mulch is applied, to reduce the chance of them continuing to invade garden beds.



Sustainable Shopping Tips

1. Ask where a product comes from and avoid buying unsustainable products.
2. Use sustainable products such as secondhand bricks, recycled timbers or recycled plastic sleepers.
3. Take your own reusable bag to carry home products.
4. Reuse your plastic plant pots or return them to a garden centre pot recycling bin.
5. Bulk purchasing of products like compost, mulches and soils can reduce your carbon footprint by minimising packaging and transport. Consider purchasing in bulk and sharing with your neighbours.
6. Share seeds, excess produce and even home made products like worm wee and compost with other gardeners in your community.
7. Shop locally!

Further Information

Further reading

Native Plants of Melbourne - David and Barbara Jones (1999) Blooming Books, Melbourne

Flora of Melbourne: A Guide to the Indigenous Plants of the Greater Melbourne Area - Society for Growing Australian Plants, Maroondah Inc. (2001), Hyland House, Melbourne

Flora and Fauna of the Seven Creeks Catchment - F.A.M Mackay, Seven Creeks Catchment Group (1993), Strathbogie

There are many other great books about gardening with native plants and gardens. Your local nursery or bookshop may be able to make further recommendations or you could visit specialist bookshops at the **Royal Botanic Gardens** (Cranbourne and Melbourne) or the CSIRO's website (www.csiro.gov.au). Mitchell and Strathbogie libraries also have a wide selection of books available for loan. For branch locations and opening hours visit the council websites.

Useful links

- ⌘ Sustainable Gardening Australia – www.sgaonline.org.au
- ⌘ Sustainable Communities Program - www.sustainable-communities.com.au
- ⌘ Weed Society of Victoria – www.wsvic.org.au
- ⌘ Invasive Species Council – www.invasives.org.au
- ⌘ Department of Sustainability and Environment – www.dse.vic.gov.au
- ⌘ Weed CRC – www.weeds.crc.org.au
- ⌘ Greening Australia – www.greeningaustralia.org.au
- ⌘ Trust For Nature – www.trustfornature.org.au

Native Nurseries

There are several local indigenous nurseries in the Mitchell and Strathbogie Shires, including the Euroa Arboretum which showcases indigenous plants and artworks. Contact your local Council for up to date contact details.





**Sustainability
Fund**



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Sustainable Gardening Australia is a non-profit organisation dedicated to helping Australians to garden in an environmentally sensitive manner. SGA provides free advice on gardening practices and clearly identifies low environmental impact products. Our mission is to change the way all Australians garden, to ensure they are working with the environment while engaging in their favourite hobby – gardening! Find out how sustainable your garden is by visiting SGA's website: www.sgaonline.org.au and follow the links on the home page to conduct your own sustainable garden audit. And while you are there, check out the free sustainable gardening information pages and garden forum.

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