





Our gardens provide a fantastic opportunity to interact and connect with nature.

ardens can be beautiful to look at, provide a place to entertain or escape to as well as a place for local wildlife to visit and live. By planting native vegetation, particularly indigenous vegetation, you can attract local wildlife to your garden and enjoy in the colour, movement and sound that they bring.

The natural environment of the Warrnambool area has undergone significant changes with less than 10% of the indigenous vegetation that originally existed prior to European settlement remaining. The plant communities that were once widespread across the Warrnambool municipality can be found at Appendix 1.

The remaining indigenous vegetation is patchy and isolated which can make it difficult for wildlife to move around the Warrnambool area. The reduction in indigenous plants has resulted in a decline in native wildlife, as the wildlife depend upon these plants for food and shelter.

You can help improve the habitat for wildlife by planting native vegetation, in particular indigenous plants, and including other wildlife friendly elements in your garden. This will encourage more local wildlife back into the gardens of Warrnambool. In return you will be rewarded with the colour and movement wildlife brings. Imagine sitting outside, sipping a drink in the dappled shade of your garden on a sunny day, watching the birds flit around and listening to their song, or seeing butterflies dance around your flowers or even a lizard basking in the sun. The possibilities are endless, even very small gardens can attract wildlife.

Note: Native plants are those that naturally occur in Australia, whereas as indigenous plants, whilst also native, are the naturally occurring plants of a specific area. Indigenous plants of Warrnambool have adapted to local soil types and weather conditions.

Plant selector tool

plant selector tool has been created to assist local residents to choose the best indigenous native plants to suit the space in their garden. Some other natives, that are known to grow well in Warrnambool have also been included. The tool allows users to select a number of different parameters to narrow down their search such as plant size, growing conditions or biodiversity benefits and is available on the Warrnambool City Council website.

www.warrnambool.vic.gov.au/plant-selector-tool





Food

ocal wildlife will be attracted to your garden if food is present, this food may be plants or insects. Plants provide nectar, pollen, seeds, fruit or leaves whilst insects associated with these plants, the soil or mulch are a food source for birds, lizards, frogs and mammals.

Water

Vildlife requires water for survival and a reliable water source, especially in summer, may be difficult for wildlife to find. It is not just birds that rely on water in your garden, but butterflies and even frogs. A birdbath can provide a place for birds to drink and bathe and a dish of damp sand or a small puddle can provide water for butterflies. Frogs also need water to survive and breed, the addition of a frog bog or pond may be something you consider for your garden.

Shelter

Wildlife will need shelter from the weather along with predators. Dense or prickly shrubs along with mature trees can provide shelter for birds, mammals and even insects. Grasses and groundcovers can also provide shelter for lizards, frogs, insects and other small mammals.

Garden Layers

reating layers within your garden is a fantastic way of providing a variety of food and shelter for wildlife. Garden layers include trees, shrubs, grasses, groundcovers and mulch. A good mix of layers also produces a great looking garden.

All layers in the garden are important from tall mature trees which can provide nesting sites, nectar, pollen, seeds and even tree hollows when they are old enough, to mulch which is home to many insects and can provide shelter for lizards, frogs and even microbats.

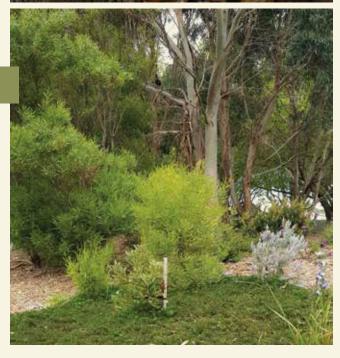
Other considerations

ther factors which should be considered when making your garden more wildlife friendly are pet ownership and pest control. Native wildlife can become prey for pets, particularly cats. Pets should be kept indoors at night to help reduce this threat. The use of outdoor cat enclosures will assist in reducing predation of native wildlife.

Reducing the use of chemicals will also make your garden more wildlife friendly. The wildlife within your garden such as birds, bats, lizards and frogs will eat insects and can provide natural pest control. More information on chemical use can be found in the garden maintenance section.







INVITING SPECIFIC WILDLIFE IN

Attracting native wildlife to your garden adds colour, interest and movement and can be a rewarding enjoyable experience as well.



Native bees the proficient pollinators

ees play an important part in the pollination of gardens. When thinking about bees, most people picture European honeybees, which only pollinate about 5% of Australia's native plants. Australia has over 2000 species of native bees, which are extremely important for pollinating native plants. They will also helpfully pollinate your fruit and vegetable gardens as well. Unlike European bees, most native bees are solitary, this means female bees build tiny individual tiny nests in small timber hollows or burrows in the ground, to lay their eggs after mating. Native bees are not aggressive and as such stings from these bees are rare.

There is a vibrant mixture of almost 1000 species of native bees that can be found in the Warrnambool

area. These include blue banded bees, colletic bees, yellow face masked bees, euroglossine bees, halictine bees, sweat bees as well as resin and leaf cutter bees.

There are many native plants that provide food for native bees, these include eucalyptus, brachyscomes, grevilleas, tea-tree and hibbertia. It should also be noted that bees will be more attracted to a mass plantings of particular flowers, at least three, than scattered individual plants.

Native bees also need nesting places, these can include dead pithy stems, hollow stems and canes or deep narrow holes in logs or timber. A bee hotel can be constructed to provide nesting sites as well, this is a great project for everyone to get involved in.

Beautiful butterflies

o attract butterflies to your garden you need to supply flowers as they feed on nectar. Butterflies prefer simple scented clusters of yellow, orange, blue, purple or white flowers. Daisies, pelargoniums, pea flowers, tea-tree and bluebell flowers are firm favorites. However they also need plants suitable to lay their eggs and provide food for their caterpillars such as kangaroo grass and tussock grass.

Some native butterflies you may see in your garden include the Common Brown, Shouldered Brown, White-banded Grass-dart, Australian Admiral, Australian Painted Lady, Meadow Argus, Saltbush Blue, Tailed Blue and Caper White.

Some indigenous plants that will help attract butterflies to your garden include Sweet bursaria (Bursaria

spinosa), Kangaroo grass (Themeda triandra), Tussock grass (Poa labillardierei), Running postman (Kennedia prostrata), Ivy-leaf violet (Viola hederacea), Long-purple flag (Patersonia occidentalis), Austral indigo (Indigofera australis), Prickly tea-tree (Leptospremum continentale) Wooly tea-tree (Leptospermum lanigerum), Hop goodenia (Goodenia ovata) Black wattle (Acacia mearnsii) and Messmate (Eucalyptus obliqua).

It is also helpful to know butterflies use the morning sun to warm themselves and shady places to shelter from hotter temperatures during the day. Butterflies will enjoy gardens with a damp shady patch beneath some native trees or shrubs, plants that flower at different times so they have a steady source of food, some rocks to sun themselves on, along with some native grasses and sedges for caterpillars to shelter in.



BRING IN THE BIRDS

Birds visiting your garden provide colour, movement and song and for many people this is one of the greatest pleasures the garden can offer.



o invite more birds into your garden you will need to provide food, water and shelter. Feeding birds naturally is preferable to artificial food and with some planning you can feed birds with appropriate food plants and provide shelter as well.

Providing a source of water is also helpful for attracting birds which is something almost anyone can do. There are however a few things to consider when providing water for birds such as the depth of water and the placement in relation to predators and shelter.

The best type of birdbath is one that is clean, non-slip, shallow, shaded from the hot sun and is close to some shelter in the form of a dense shrub or a clump of trees and shrubs of differing heights. It is a good idea to place your birdbath higher off the ground to avoid predation by cats or hang it from a tree. Placing a rock in the middle of the birdbath will provide an additional perching place for birds as well.

Small birds

mall birds include insect eating birds such as the Superb Fairywren, Willie Wagtail, Grey Fantail and Silvereyes. These birds will forage in the lower layers of your garden for insects, caterpillars, spiders, small seeds and berries.

Small birds also benefit from dense plantings of prickly shrubs as these provide the best shelter from the weather, larger birds and other predators when eating, drinking or bathing.

Some local indigenous plants that attract small birds are Kangaroo grass (Themeda triandra), Tussock grass (Poa labillardierei), Prickly tea-tree (Leptospermum continentale), Woolly tea-tree (Leptospermum lanigerum), Prickly moses (Acacia verticillata), Small-leaved clematis (Clematis microphylla), Coast daisy (Olearia axillaris), Snowy daisy-bush (Olearia lirata), Hop goodenia (Goodenia ovata), Sweet bursaria (Bursaria spinosa), Scented paper-bark (Melaleuca squarrosa).

Some other suitable native plant species are paperbarks (*Melaleuca*), wattles (*Acacia*) and daisies.

Other small birds such as the New Holland honeyeater are nectar eating birds, however insects are included in their diet as well. Planting species with flowers that produce a lot of nectar and pollen such as Correas, Banksias and Eucalypts will encourage these birds into your garden.

Some of the best local indigenous plants to attract honeyeaters are Grannys Grave correa (Correa reflexa Grannys Grave), Silver banksia (Banksia marginata), Swamp gum (Eucalyptus ovata) Scented paper-bark (Melaleuca squarrosa) and Running postman (Kennedia prostrata). Some other native plants that will attract honeyeaters include correa, banksia, emu bush, grevillea, hakea, dryandra and bottlebrush.







Frog friends

ome common frogs found in Warrnambool that may already be visiting your garden are the Common Froglet, Brown Tree-frog, Eastern Banjo frog, Striped Marsh frog, Smooth Marsh frog and the Smooth frog.

The addition of a frog pond in your garden can encourage frogs to visit, you have more of a chance of attracting frogs to your garden if you live near a wetland, river or other waterway. If you already have a boggy area in your garden that remains wet throughout winter this is an ideal spot to create a frog bog or frog pond.

It should be noted that the calls of frogs can be quite loud, so if you are intending on having a frog bog or pond in your garden, you may want to consider its placement. A frog pond placed outside a bedroom window may not be the best idea for restful sleep. You also need to ensure the water supply for frogs is not a threat to children.

Frogs need shelter around their ponds, local indigenous plants such as Dianella species, Spiny-headed mat-rush (Lomandra longifolia), Ivy-leaf violet (Viola hederacea), Kangaroo grass (Themeda triandra) and Common wallaby-grass (Rytidosperma caespitosum) will provide this. Shelter can also be provided by small logs, rocks and leaves next to the pond. The pond should be made of materials that are not toxic to frogs, have sloping sides so they can move in and out and contain tadpole food plants.

Likable Lizards

izards eat insects and can be beneficial to your garden. As lizards are cold blooded, they need the sun to warm themselves in order to move and digest their food. Encouraging lizards to your garden is as simple as providing a flat rock in a sunny position for them to warm themselves on and providing shelter in the form of grasses, groundcovers and mulch.

You may even like to provide a small piece of recycled corrugated iron for them to shelter under in the winter, this will allow them to warm up quicker in the colder temperatures. The use of chemicals to control insects should cease to ensure lizards have plenty of insects to eat.





With all the information provided, creating a garden for wildlife might seem overwhelming.

t is important to remember that gardens are not created instantly and constantly evolve. Making your garden more wildlife friendly does not mean removing all the existing vegetation from the garden and starting over again. If you have an established garden, it is likely that it is already providing habitat for wildlife which may be as simple as pollen for native bees or butterflies.

You can provide more habitat by considering the needs of native wildlife as outlined in the previous sections. You may gradually replace some introduced species with indigenous or native plants, or introduce some of the other elements required by wildlife into your garden, such as a water source for birds. The more wildlife friendly elements you include in your garden, the more wildlife you can attract.

However your garden does not have to cater for all wildlife, you may want to focus on an area of your garden to improve to attract more small birds or maybe you love butterflies and want to add more plants to attract them. How you use your garden, what you want it to look like and the wildlife you would like to attract is a very personal thing.

White-plumed Honeyeater - Photo credit Sarah Henrikson





Assess your garden

great starting place is to think about how you use your garden and what you want from it. Do you have an outdoor seating area to relax and entertain? Do you need a play space for the kids, or somewhere to sit in the shade, privacy from the neighbours or a path to different areas within the garden? What wildlife would you like to see in your garden?

Take a walk around your garden and consider the current conditions. Where are the sunny and shady areas? Are there areas exposed to coastal or strong winds? What is the drainage like? What type of soil do you have? What type of vegetation do you currently have? Do you have layers in your garden? Also look at the permanent structures of your garden such as the location of garden taps, the clothesline, tanks, sheds and pathways.

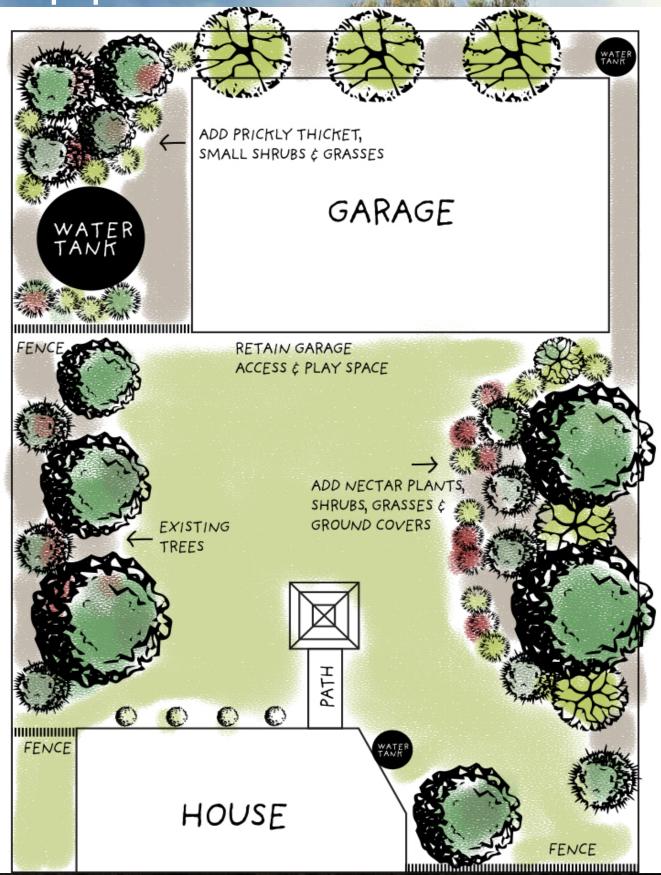
Plants and wildlife habitat

onsider the type of wildlife you would like to see in your garden and the plants required to attract them. The creation of layers in the garden is an important part of habitat gardening, do you have a mixture of trees, shrubs, grasses, groundcover and mulch? Also consider what other habitat features you need to include such as large rocks for lizards, a frog pond or birdbaths.

When deciding on plants for your garden, you need to consider their size when fully grown and their preferred growing conditions along with the type of wildlife they will attract. Consideration of the colour and timing of flowers, along with the colour and texture of foliage will ensure you have an attractive garden for both you and the wildlife.

The plant selector tool, found on the Warrnambool City Council website, can be helpful when choosing plants for your garden. You can use the tool to filter plants based on height, flowering time, light and water requirements, conditions or biodiversity benefits.

Example plan



Creating a plan

nce you have considered how you use your garden, assessed the current conditions, considered the type of wildlife you would like to attract and thought about the plants you need, you can start to create a garden plan. A plan will help you to ensure your garden will satisfy your needs as well as those of the wildlife you are wanting to attract. It will also help you to break the work down into smaller more manageable chunks without being overwhelmed. The plan should include all the habitat elements required to attract the desired wildlife, the species and numbers of plants as well as the amount of mulch required.



Watering

ndigenous plants have adapted to local weather conditions and once established in your garden can usually gain enough water from local rainfall to survive. It is best to plant during the cooler months of the year, preferably in autumn or spring. Your plants should be planted in your garden as soon as possible after you have brought them home and watered in well. They will require watering through the first summer and will thank you for a deep watering once a week.

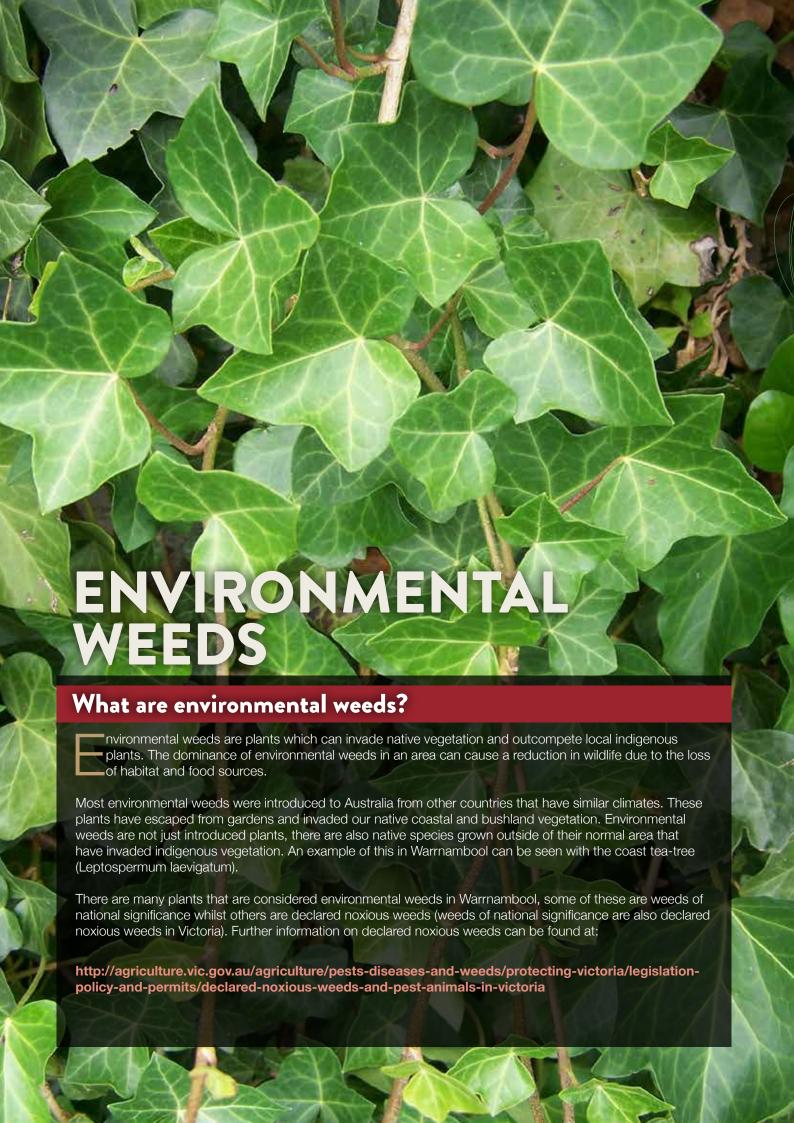
Pest control

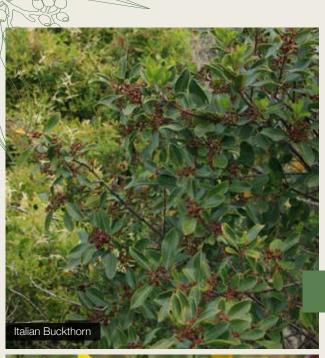
nother consideration when trying to entice wildlife into your garden in the use of chemicals. Chemicals such as insecticides are not selective and kill native bees as well as pests. If butterflies land on plants or other surfaces that have been sprayed with insecticides they will die as their taste buds are in their feet.

You can explore some of the non-toxic home remedies for pest control or better still let the wildlife help. Many insects are consumed by mixture of wildlife, even nectar feeding birds can consume as many as 200 insects in a day. Small birds such as wrens, silvereyes and fantails forage in the leaf litter and lower levels of the garden reducing plant pests. Skinks and lizards eat snails, slugs, moths, beetles and flies whilst one microbat can eat up to 600 insects an hour.

Fertiliser

ndigenous plants have adapted to local conditions including local soils and therefore generally do not require fertiliser. The use of a good quality mulch will provide nutrients for the soil as it breaks down. If you do want to fertilise your indigenous plants, it is best to use a slow release fertiliser that is low in phosphate. There are fertilisers available that are more suited to native plants.









document entitled Advisory list of environmental weeds in Victoria April 2018 has been developed by the Arthur Rylah Institute for Environmental Research and the Department of Environment, Land, Water and Planning (DELWP). It can be found on the DELWP website and contains 1,780 plants. Whilst it is primarily designed to help biodiversity managers with the relative risks posed by different environmental weeds, it also provides an understanding of what is classified as an environmental weed in Victoria. The document can be found here:

https://www.environment.vic.gov.au/invasive-plants-and-animals/weed-risk-ratings

How you can help?

Veedy plants should not be planted in your garden, especially those that are known as environmental weeds. Even if your garden is not close to any nature reserve, seeds from these weeds can be carried long distances by wind, water, animals, birds, and people. Birds and animals eat the fruit and seeds of plants and disperse the seeds along distances away from where they were consumed. Sticky seeds are burrs can be caught on animal fur or people's clothes, shoes or vehicles and be carried from gardens into bushland or reserves. These plants can also be spread through green waste and waterways.

Avoid buying environmental weeds and find out if any of the plants that already exist in your garden are considered environmental weeds. Remove any environmental weeds from your garden over time and replace these with indigenous or non-weedy native plants. To remove environmental weeds successfully from your garden, you need to know which weed you are removing as different weeds require different treatment at different times.

Weeds need to be disposed of correctly, some environmental weeds are not suitable for composting as they have long lived seeds or bulbs and some can even grow from stems. Always dispose of your garden waste appropriately, do not dump it on roadsides or in reserves as this can cause new weed infestations.

Replacing common environmental weeds of Warrnambool

ifteen common environmental weeds in Warrnambool are shown below with alternative native replacement plants. This is by no means an exhaustive list of environmental weeds of the area. This information is provided to highlight some common weeds so that you can avoid planting them or consider removing and replacing them if they are already in your garden.

Weed		Removal	Replace with
African Lily Agapanthus		Seed spread by birds or water. Removal of entire plant or remove flowers before seed is formed.	Black-anther Flax-lily Dianella revoluta
Angled Onion Weed Allium tri- quetrum	T	Spread from seed or bulbs. Removal entire plant or application of registered herbicide	Austral Stork's-bill Pelargonium australe
Arum lily Zantedeschia aethiopica		Seed spread by birds, animals, water. Also spreads by underground stem. Removal entire plant including roots by hand or by application of registered herbicide.	Long Purple-flag Patersonia occidentalis
Bridal Creeper Asparagus asparagoides		Seeds spread by birds, animals, water. Also spreads by underground tubers. Removal of entire plant including all tubers or application of registered herbicide.	Small-leaved Clematis Clematis microphylla
Coastal tea- tree Leptosper- mum laeviga- tum		Seed spread by wind, water and ants. Whilst this is a native plant it can become weedy other indigenous tea-tree will be more suitable. Removal of small plants by hand or felling of mature trees.	Prickly Tea-tree Leptospermu continentale
Cape Wattle Paraserian- thes lophan- tha		Seeds spread by wind, water, insects and birds. Removal of small plants by hand or felling mature trees.	Black Wattle Acacia mearnsii
Cotoneaster Contoneaster glaucophyllus		Seeds spread by birds and animals. Also spread by regeneration of stems or branches. Removal of entire small plants or application of registered herbicide.	Coast Beard-heath Leucopogon parviflorus

Seeds spread by birds, wind and water. Also spread by plant parts germinating. Removal of entire plant by pulling out both vines and roots or application of registered herbicide	Small-leaved Clematis	
Seeds spread by bird or water. Also spread by underground stem (corms). Remove by hand, including underground corms in Aug-Sept or spray with registered herbicide.	Long Purple-flag <i>Patersonia</i> occidentalis	
Seeds are dispersed by water and wind. Removal entire plant or application of registered herbicide.	Dune Fan-flower Scaevola calendulacea	
Seeds are spread by birds and animals. Also spread by suckering. Removal of small plants by hand or application of registered herbicide.	Common Boobialla <i>Myoporum</i> insulare	
Seeds spread by birds and animals. Removal of small plants by hand or digging. Application of registered herbicide for larger plants.	Prickly Currant-bush Coprosma quadrifca	
Seeds spread by birds, ants, water, wind, vehicles, shoes, clothing. Hand pull seedlings. Larger plants can be cut at base or registered herbicide applied.	Austral Indigo Indigofera australis	
Seeds spread by wind. Dig out entire plant including all roots.	Red-fruit Saw-sedge <i>Gahnia</i> Sieberiana	
Seed spread by birds and animals. Also suckers. Removal of small plants by hand or application of registered herbicide.	Blackwood Wattle Acacia melanoxylon	
	water. Also spread by plant parts germinating. Removal of entire plant by pulling out both vines and roots or application of registered herbicide Seeds spread by bird or water. Also spread by underground stem (corms). Remove by hand, including underground corms in Aug-Sept or spray with registered herbicide. Seeds are dispersed by water and wind. Removal entire plant or application of registered herbicide. Seeds are spread by birds and animals. Also spread by suckering. Removal of small plants by hand or application of registered herbicide. Seeds spread by birds and animals. Removal of small plants by hand or digging. Application of registered herbicide for larger plants. Seeds spread by birds, ants, water, wind, vehicles, shoes, clothing. Hand pull seedlings. Larger plants can be cut at base or registered herbicide applied. Seeds spread by wind. Dig out entire plant including all roots. Seed spread by birds and animals. Also suckers. Removal of small plants by hand or spistered by birds and animals. Also suckers. Removal of small plants by hand or spistered by birds and animals.	water. Also spread by plant parts germinating. Removal of entire plant by pulling out both vines and roots or application of registered herbicide Seeds spread by bird or water. Also spread by underground stem (corms). Remove by hand, including underground corms in Aug-Sept or spray with registered herbicide. Seeds are dispersed by water and wind. Seeds are dispersed by water and wind. Seeds are blant or application of registered herbicide. Seeds are spread by birds and animals. Also spread by suckering. Removal of small plants by hand or application of registered herbicide. Seeds spread by birds and animals. Removal of small plants by hand or diggling. Application of registered herbicide. Seeds spread by birds, ants, water, wind, vehicles, shoes, clothing. Hand pull seedlings. Larger plants can be cut at base or registered herbicide australis australis and cut at base or registered herbicide australis. Seeds spread by wind. Seeds spread by wind. Seeds spread by birds and animals. Removal of small plants by hand or diggling. Application of registered herbicide australis australis australis. Seeds spread by birds, ants, water, wind, vehicles, shoes, clothing. Hand pull seedlings. Larger plants can be cut at base or registered herbicide australis. Seeds spread by wind. Seeds spread by wind. Seeds spread by birds and animals. Austral Indigo Indigotera australis Sieberiana Seed spread by birds and animals. Also suckers. Seed spread by birds and animals. Also suckers. Removal of small plants by hand or Wattle Acacia





The vegetation of Victoria has been classified into Ecological Vegetation Communities (EVCs). An EVC is a group of plants that are naturally found together in a particular environment as they have similar environmental requirements. The Warrnambool municipality had at least 12 vegetation communities prior to European settlement, their distribution can be seen on the map below. The corresponding identification number for each of these EVCs is also listed.

lants consistent with the EVC identified in your area are ideal to plant in your garden, suitable for your site, particularly in smaller gardens, species from other EVCs located nearby may also be used. A benchmark has been prepared for each EVC which contain a typical list of species, however it should be noted that it is not a comprehensive list of species and not all species listed may not be appropriate to all sites nor available through nurseries. Regardless of this, the benchmarks are a very useful tool for selecting appropriate plants for your area.

The benchmarks for EVC 3, 10, 160, 651, 161, 653 along with EVC 53 and 653 (which make up EVC 720) can be found at:

https://www.environment.vic.gov.au/__data/assets/pdf_file/0031/48757/WaP_EVCs_combined.pdf

EVC 191, 895 and 175 (which make up EVC 666, a mosaic) can be found at:

https://www.environment.vic.gov.au/__data/assets/pdf_file/0029/48755/VVP_EVCs_combined.pdf

The map shows two EVC mosaics, these do not have a benchmark of their own, instead the benchmarks of the EVCs contained within the mosaic should be consulted. For example EVC 666 contains EVC 191 Riparian Scrub, EVC 895 Escarpment Shrubland and EVC 175 Grassy Woodland, all of these benchmarks should be consulted and may be applicable to the area.



EARLY VEGETATION COMMUNITIES OF WARRNAMBOOL



