Habitat

Attracting native wildlife into your garden







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Introduction

Our gardens provide an opportunity to support our unique plants and animals. Many local plants are great choices for landscaping, and can be used in any style of garden. In addition, your garden can provide a stepping stone for native birds and animals to move safely across our highly urbanised landscape.



Indigenous plants and biodiversity

Indigenous plants are the original or local plants that occur naturally, in a given location. They have adapted to the conditions within the local environment such as the soil and climate.

These local plant species have also evolved alongside native wildlife, therefore providing the best possible food and shelter for native animals. A greater variety of indigenous plant species means more food and a more diverse habitat for native wildlife. Wildlife corridors connect isolated areas of habitat in a landscape.

Habitat

The environment where an animal naturally lives or occurs.

Habitat along a creek for example, allows wildlife to move through the landscape more easily with greater access to food and shelter. Indigenous gardens act in a similar way, providing a habitat stepping stone to help local wildlife move around the landscape. Biodiversity is important as it sustains the natural systems which provide us with clean air and water, regulate climate and maintain healthy soils for food production.

Biodiversity

The variety of life forms, including plants, animals, micro-organisms and the ecosystems of which they are a part. Biodiversity encompasses all living things and, importantly, the functions and processes that link and sustain them.

A high diversity of plant species improves the chances of local ecosystems to survive destructive events or processes such as fire or climate change.



The benefits of establishing indigenous plants are that they:

- are perfectly suited to our local soils and climate, and many species will thrive without fertilisers or sprays
- require little maintenance to keep them looking healthy and neat
- can withstand Melbourne's hot, dry summers and long dry periods with little or no watering
- grow quickly and often flower within the first season of being planted
- have greater resistance to disease
- attract and provide food and shelter for native wildlife
- reflect Wyndham's natural character, preserving and enhancing a sense of local identity
- will save you money and water
- offer you an opportunity to grow a more sustainable garden.

What are native plants?

While indigenous plants are species which occur naturally in a local area such as the City of Wyndham, there are also species known as native plants.

Many retail nurseries sell 'native' plants, which refers to any plant species that occurs naturally in Australia. They can include a Grevillea species from NSW or a Eucalypt from Tasmania.

Just like plants introduced from another country, native plants have the potential to become an environmental weed.

For example, the Bluebell Creeper (*Billardiera heterophylla*) from Western Australia was a popular native nursery plant that is now aggressively invading bushland around Victoria.

Our changing environment

Alterations to the natural environment can have a number of effects including a decrease in habitat and a loss of biodiversity.

Urbanisation

In Victoria, over half the native vegetation that originally existed has been cleared since European settlement for houses, roads and other infrastructure. Vegetation in the landscape now exists as isolated patches which are not well connected. This makes it difficult for wildlife to move around and reproduce, resulting in a decline of species numbers. Replacing areas of native vegetation with surfaces such as concrete also contributes to an increase in temperatures in urban areas known as the urban heat island effect.

Climate change

Changes in our global climate are impacting our natural environment. Ongoing lower rainfall and an increase in heatwaves and storm events are predicted to continue. It is difficult for plants and animals to adapt quickly to new conditions, resulting in a loss of native species and biodiversity.

Weeds

Many non-indigenous species can become invasive, competing with indigenous plants for space, nutrients, water and light. This results in a reduction of habitat for wildlife and a loss of biodiversity. (For more information, refer to pages 45-47).

Pollution

Herbicides, pesticides and fertilisers from our gardens can enter our stormwater system, where they end up polluting our local waterways and harming plants and wildlife. (For more information, refer to page 33).





Wyndham plant communities

Wyndham has 18 main plant communities that were once more widespread but are now fragmented across the municipality. The Plains Grasslands are now critically endangered at a national level. The four dominant communities are:

Plains GrasslandFloodplain RiparianDominated by tussock grasses, wildflowers
and herbsDominated by River Red Gum, shrubs and a
groundcover of grasses, herbs and sedges.

Plains Grassy Woodland

Dominated by River Red Gum, Grey Box, Drooping Sheoak and tussock grasses.

Coastal Saltmarsh

Dominated by rushes, sedges, forbs and aquatic plants.

Eco Hotspots

One of the best ways to find out how indigenous plants look and the conditions they thrive in is to go and see them in their natural environment. Wyndham's most significant natural environments include:

- Cobbledicks Ford Reserve
 Heathdale Glen Orden Wetlands
- 5. Werribee River Park
- ands 6. Grahams Wet
- Lollypop Creek Grassland Recreation
- 4. Alamanda Wetland

- Weinbee River Fark
- . Grahams Wetland Reserve
- 7. Cheethams Wetlands and Point Cook Coastal Park

Garden design

Start small but plan BIG!

Site analysis

The starting point with garden design is to do a site analysis of your garden. This allows you to identify the pros and cons, limitations and possibilities for your garden. It is also important to work with the site as it can help with plant selection. For example, if you know a section of your garden is shady and damp, select plants that are suited to those conditions rather than trying to change the site.

Step 1

What exists?

Create a scaled drawing of your property, either on graph paper or sketch paper. Mark in the main structural and environmental features. Fences, pathways, shed, outdoor taps, clothesline, patio, rainwater tank, garden beds, major trees and lawn areas. Where are your sunny and shady areas in summer and winter?

Do you have any drainage issues where the ground is often too wet or dry? Do you have any significant slopes that need to be terraced?

Step 2

What are your needs?

Create a wish list. Do you prefer a cottage garden, a bush garden or a neatly pruned garden? What plant and flower colours and textures appeal to you? Look through gardening magazines or your neighbourhood gardens. Make notes on what appeals to you and what plants create the look you like. Do you want a completely indigenous garden, or do you just want an indigenous garden bed outside your living room? Do you want a frog pond? A bench under a tree to sit and relax? More birds in your garden? Do you want to reduce or remove your lawn? Do you want a meandering path through different areas within the garden? Make a note of the initial major work that would need to be done with each option e.g. garden bed edges curved out; relocate clothesline.



Step 3

Look at your plants

Remember to work with your site. What plants would you need to remove? Is a staged approach needed? Could indigenous plants work with existing exotic plants? Are your plants grouped according to their water needs? Do you have a good range of plant layers from trees to groundcovers? Do you have any trees that may need attention? What type of soil do you have?

Simple soil test

To work out your garden soil type simply take a handful of slightly moist soil and squeeze it. If it forms a smooth ball, it's a clay soil. If it does not hold form and simply falls apart, it's a sandy soil. If it roughly holds together, but falls apart readily when squeezed, it's a loam soil. (For information on improving your soil refer to page 29).



Step 4

The research

Create a list of the plants you need to create the style of garden you desire. If you have a shady, damp area ensure you select the appropriate plants for those conditions. Roughly how many plants would you need for a particular bed? What sort of cost are you looking at? Remember you can save money if you buy plants as young tubestock. List the materials you need such as mulch, feature rocks, pond liner, a bench, and find out the costs. (For information on indigenous plants refer to pages 34-44).

Step 5

Develop a plan

Once you have decided on what you want, you can explore different options in your garden plan. Think about what plants work well together and how you would plant them to create layers. Focus on one area at a time so you are not overwhelmed. Remember it doesn't all have to be done immediately, but rather according to a well thought out garden plan.







Creating your habitat garden

A wide variety of indigenous plants and landscape features provides a range of places for many birds, insects and other animals to feed and shelter.

Key design elements of a habitat garden

Many native animals depend on indigenous plants for food, shelter (from predators, competitors or the weather), or somewhere to breed safely. Likewise, indigenous plants benefit from native animals through pollination, seed dispersal, pest control, waste breakdown and soil maintenance.

Layers

A key to creating a habitat garden is to create structural diversity – lots of plants and lots of different layers. Aim to create a mix of trees, shrubs of varying height, grasses and groundcovers.

If you are considering replacing a considerable number of non-indigenous plants in your garden, a planned approach is important. Blitzing a garden may result in wildlife abandoning your garden for years, or being exposed and preyed upon if the intact vegetation is removed too quickly. Better to adopt a staged approach with patches of intact vegetation progressively replaced with new indigenous plants.

Dead trees and shrubs can also provide habitat for many of our native wildlife. Likewise a few logs, rocks, sticks, mulch and leaves on the ground can provide habitat for many local insects and lizards. Note that logs should not be sourced from bushland areas where they are already providing habitat.





Food

Plants that produce nectar, pollen, seeds, fruit, leaves and roots provide food for many of our native animals. Dead plant material can also be a source of food. Insects that live on the plants, mulch and soil also provide food for birds, lizards, frogs and mammals. (For further information on plants to attract wildlife, refer to pages 17-24).

Host Plants

Some insects, such as butterflies, only lay their eggs on certain plants known as host plants. Most native caterpillars are small, shy and nocturnal leaving little evidence of their presence in your garden. If you want butterflies to stay in your garden, include host plants such as Kangaroo Grass (*Themeda triandra*) for Common Browns, Everlasting Daisies (*Xerochrysum* spp.) for Painted Ladies or Wallaby Grass (*Rytidosperma* spp.) for Golden Sun Moths.

Water

A reliable water source, particularly in summer, will help attract wildlife to your garden. A shallow birdbath on a pedestal next to a dense or prickly shrub will help protect birds from predators while they bathe and drink. Frogs need a permanent or semi-permanent water source to keep their skin moist and provide opportunities to breed. Butterflies love to gather on a wide dish of damp sand or a small puddle in the soil. They take in water and essential salts and minerals from the soil.

Shelter

Native wildlife needs to find shelter from bad weather, predators, and competitors. They need a refuge in which to build their homes and raise their young. Prickly shrubs such as Hedge Wattle (Acacia paradoxa), Blue Devil (Eringium ovinum), Sweet Bursaria (Bursaria spinosa) or Bushy Needlewood (Hakea decurrens) and mature trees such as the Yellow Box (Eucalyptus melliodora) can provide homes for a large range of insect, bird and mammal species.











Tree hollows

are particularly important for nesting and breeding for many parrots, large birds, microbats and possums. Due to the clearing of old trees, there is now a shortage of hollows for many of our native mammals and birds. As a result, many species are finding it difficult to nest and breed. Consider adding nest boxes to your garden. Different species require different nest boxes.

A sunny spot

Lizards, frogs and insects need the warmth of the sun to function. A large rock or log that receives the winter sun will be a welcome basking point for wildlife.

Responsible pet ownership

Ensure your efforts to attract native wildlife to your yard are not undone by pets such as cats and dogs. Keep your pets, especially cats, inside during the night to avoid them attacking wildlife. Collar bells on cats have limited success.

Natural pest control

The greater the diversity of wildlife in your garden, the greater the natural pest control potential it will provide. Birds, bats, frogs, lizards, spiders and insects such as praying mantis all eat insects. Monitor your garden regularly, tolerate a minor infestation, remove pests such as snails by hand, or use home remedies such as linseed oil traps for earwigs.

Encourage others

Invite your neighbours to create a habitat garden as well. This will attract more wildlife to the whole area.

Native wildlife needs to find shelter from bad weather, predators, and competitors.







Native animals

Attracting native animals to your garden can add extra colour, interest and enjoyment.

Native bees

There are over 1500 species of native bee in Australia, including 10 stingless species. Most are solitary bees which raise their young in burrows in the ground or tiny hollows in timber. Consider adding a 'bee hotel' to your habitat garden to provide shelter for these important pollinators of our unique vegetation.



Attracting butterflies and other invertebrates to your garden

Butterflies are a welcome addition to any garden. A dish of damp sand for moisture and salts, a flat rock to bask in the morning sun and a sheltered retreat from the midday sun will attract butterflies to your garden. Butterflies prefer flat flowers, such as daisies, that are easy to land on in order to feed on nectar. They are attracted to a range of flower colours, in particular blue, yellow and red. Plant large groups of flowering plants together for a greater chance of attracting butterflies. If you want butterflies to stay in your garden, include host plants that they can lay their eggs on. Examples include Kangaroo Grass (*Themeda triandra*) for Common Browns, or Wallaby Grass (*Rytidosperma* spp.) for Golden Sun Moths.

Native invertebrates such as butterflies, bees, ladybirds, ants, gnats, beetles, spiders, dragonflies and lacewings benefit the environment in many ways. They are our plant pollinators, our waste recyclers, our pest eaters and an important source of food for many native birds, frogs, reptiles and mammals.



Plants to attract butterflies and other invertebrates

Basalt Daisy (Brachyscome basaltica)

Clustered Everlasting (Chrysocephalum semipapposum)

Common Everlasting (Chrysocephalum apiculatum)

Chocolate Lily (Arthropodium strictum)

Creeping Bossiaea (Bossiaea prostrata)

New Holland Daisy (Vittadinia cuneata)

Common Tussock-grass (Poa labillardieri)

Kangaroo Grass (Themeda triandra)

Common Sedge (Carex tereticaulis)

Spiny-headed Mat-rush (Lomandra longifolia)

Austral Indigo (Indigofera australis)

Hop Goodenia (Goodenia ovata)

Sweet Bursaria (Bursaria spinosa)

Woolly Tea-tree (Leptospermum lanigerum)



Eastern Yellow Robin

Plants to attract small birds

Red-browed Finch

Small birds, such as Silvereyes, Red-browed Finch, Eastern Yellow Robin, Spotted Pardolotes, Grey Fantail and Superb Fairy-wren, forage in the protected lower levels of the garden. They feed on insects, caterpillars and spiders and eat berries and seed. The following indigenous plants are an example of some plants that will attract small birds to your garden:

Berry Saltbush (Atriplex semibaccata)

Blue Devil (Eringium ovinum)

Climbing Saltbush (Einadia nutans)

Small-leaved Clematis (Clematis microphylla) Common Tussock-grass (Poa labillardieri)

Kangaroo Grass (Themeda triandra)

Hedge Wattle (Acacia paradoxa)

Sweet Bursaria (Bursaria spinosa)





Red Wattlebird ew Holland Honeyeate

Plants to attract honeyeaters

Honeyeaters such as the Singing Honeyeater, Little Wattlebird, White-plumed Honeyeater, Red Wattlebird and New Holland Honeyeater are attracted to the flowers of plants that produce lots of nectar. They also include insects in their diet. The following indigenous plants will attract honeyeaters to your garden:

Creeping Bossiaea (Bossiaea prostrata)

Running Postman (Kennedia prostrata)

Austral Indigo (Indigofera australis)

Moonah (Melaleuca lanceolata) **River Bottlebrush** (Callistemon sieberi)

Rock Correa (Correa glabra)

Golden Wattle (Acacia pycnantha)

Silver Banksia (Banksia marginata)





Plants to attract parrots

Parrots feed on a variety of food sources. Some such as Eastern Rosellas, Rainbow Lorikeets, Gang-gang Cockatoos and Musk Lorikeets feed on the flowers and seed of Eucalypts, She-oaks and Bottlebrush. Red-rumped Parrots feed mainly on the ground sourcing indigenous grass seed. Long-billed Corellas dig for ground tubers and Yellow-tailed Black-Cockatoos love to find grubs hiding under tree bark. The following indigenous plants will attract parrots to your garden:

Common Tussock-grass (Poa labillardieri)

Moonah (Melaleuca lanceolata)

River Bottlebrush (Callistemon sieberi) Blackwood (Acacia melanoxylon)

Drooping She-oak (Allocasuarina verticillata)

Silver Banksia (Banksia marginata)



Attracting lizards and skinks to your garden

The Australian Wildlife Conservancy states that Australia has more threatened reptile species than any other country in the world. Small reptiles such as lizards and skinks have declined steadily from suburban gardens because of lack of suitable habitat, dog and cat attack, lawn mower encounters and from eating snails poisoned by snail bait (even pet-friendly ones). To encourage lizards and skinks, such as the Blue-tongue Lizard, Tussock Skink, Marbled Gecko or Garden Skink, into your garden provide some protected, flat rocks, logs or brick paving in a sunny spot for them to warm up. Cultivate lots of leaf litter and provide mulch where they can hunt for insects and tussock grasses for protection.

Plants to attract lizards and skinks

Berry Saltbush (Atriplex semibaccata) Blue Devil (Eringium ovinum) Climbing Saltbush (Einadia nutans) Kangaroo Grass (Themeda triandra) Knobby Club-rush (Ficinia nodosa) Seaberry Saltbush (Rhagodia Candolleana)





Avoid using snail baits, including the pet friendly ones, in your garden. Blue-tongue lizards will die if they eat either the snail bait or the dead snails.

Snakes

Snakes perform a vital role in the environment as one of our few native predators. From time to time they may appear in a suburban garden looking for a meal. Snakes are shy and will generally avoid a busy residential garden. You can make your garden less appealing by ensuring you avoid having stacks of timber and tin lying around or long grass. If you do discover a snake in your garden you should not try and handle them yourself. Most bites occur when people try and kill a snake. Not only is this dangerous, but it is illegal to kill a snake in Victoria. Instead contact Wyndham City on 9742 0777 and if it is still visible they will relocate the snake to a safer area for free.

Attracting frogs to your garden

Frog populations have undergone serious declines in recent decades and a third of species are now listed as threatened worldwide.

Eastern Australia has been identified as a global hotspot of frog decline with nine species already listed as extinct in the last 20 years. Not only are frogs vulnerable to the issues of habitat loss and feral animal predation, but they are also susceptible to disease, pollution, pesticides and climate change. Wyndham is home to many species of frogs including the Growling Grass Frog, Pobblebonk and Spotted Marsh Frog. You need to create a permanent frog friendly garden and hope that they move in.



Plants to attract frogs

Deep water zone:

Nardoo (Marsilea drummondii) Running Marsh-flower (Villarsia reniformis) Water Millfoil (Myriophyllum crispatum)

Shallow water zone:

Common Sedge (Carex tereticaulis) Common Spike-rush (Eleocharis acuta) Tassel Sedge (Carex fasicularis)

Damp zone:

Marsh Club-sedge (Bolboschoenus medianus) Swamp Stonecrop (Crassula helmsii) Water Plantain (Alisma plantago-aquatica)

Pond surround:

Knobby Club-rush (Ficinia nodosa) Loose-flower Rush (Juncus pauciflorus) Spiny-headed Mat-rush (Lomandra longifolia)



Building a frog pond

Locate your pond in a low-lying section of the garden that has 60-70% shade. Shade from shrubs and small trees is preferable to large overhanging trees, which may drop too many leaves and cause excessive nutrient loading in your pond. You can buy ready-made ponds or dig your own and line it with heavy-duty pond lining. An important factor is to ensure your pond has varying depth that includes a ramped shallow entry point and a deeper section to place potted aquatic plants. Be aware that safety fencing may be required depending on water depth. Please check your design complies with

Essentials

A pump should not be necessary. Tadpoles and eggs often die in pumps. As long as you do not have an excess of leaf litter falling into your pond that will result in a smothering layer of algal growth, your pond should remain healthy. Avoid floating aquatic plants such as Azolla (Azolla

Cross-section of Frog Pond

relevant regulations. Side shelves allow for additional variation and a wider range of plants. Add rocks and logs to create climbing spots and consider using a slab of rock as a water-side observation area. Cover the bottom of your pond with washed gravel. Allow your pond to fill with rainwater or tap water. Chlorinated tap water needs to stand in a clean container for 5 days to allow the chlorine to dissipate before it is added to your frog pond. Remember frogs are very susceptible to chemicals. Once your pond is full, add your plants.

filiculoides) and Duckweed (Spirodela oligorrhiza) as they can quickly cover the surface of your pond reducing light and oxygen levels. Do not introduce fish into your frog pond as they will snack on tadpoles.



Attracting mammals to your garden

According to the Australian Wildlife Conservancy. Australia has the worst mammal extinction rate in the world. Altogether, 18 mammal species have become extinct since the arrival of European settlers a little more than 200 years ago. Twenty percent of our remaining mammal species are threatened with extinction.

Wyndham is home to many species of mammal. Most likely you will encounter Eastern Grey Kangaroos, Swamp Wallabies, Echidnas, Platypus or Koalas within the Eco Hotspots of Wyndham. Mammals more likely to visit your garden include the Ringtail possum, Brushtail possum, Microbats and Grey-headed Flying-fox.

While some gardeners despair when their roses and vegetable crops become the food source of possums, we do have to remember that urbanisation has replaced their natural habitat and they have adapted extremely well to our suburban properties that offer an abundance of food and excellent nesting sites. Providing trees with hollows or species specific nesting boxes, will encourage possums, gliders and microbats to nest away from your roof especially if you close up any entry points. Microbats such as Gould's Wattled Bat eat an enormous quantity of insects each night.

Plants to attract mammals

Berry Saltbush (Atriplex semibaccata) Coast Flax-lily (Dianella brevicaulis) Kangaroo Grass (Themeda triandra) Gold Dust Wattle (Acacia acinacea) Kangaroo Apple (Solanum laciniatum)





Moonah (Melaleuca lanceolata) River Bottlebrush (Callistemon sieberi) Tree Violet (Melicytus dentatus) Blackwood (Acacia melanoxvlon)

Silver Wattle (Acacia dealbata)



Eastern Grev Kangaroo

Living with wildlife

Birds, possums and bats enjoy our plants as much as we do, sometimes a bit too much! To reduce the wildlife impacts on indigenous plants there are a number of options.

Tree guards:

If your young indigenous plants are in danger of being eaten, it may be worthwhile protecting them with a staked tree guard until they are established.

Injured wildlife:

If you find an injured animal, call your local vet or Wildlife Victoria on 1300 094 535.

Avoid feeding birds

Generally they do not need supplementary feeding. Seed trays tend to attract the more aggressive birds, and introduced pest birds such as the Indian Myna love nothing more than an easy feed from a pet food bowl. Feed pets indoors or where birds cannot access their bowl.







Wildlife of Wyndham

You may be incredibly fortunate to attract to your garden, or observe in a conservation reserve, some of the following vulnerable species that are struggling to survive the impacts of urbanization.

	Growling Grass Frog (Litoria raniformis)	Size:females (60-104mm), males (55-65mm)Habitat:among reeds, sedges and rushes growing in and along slow moving waterDiet:mostly invertebrates such as beetles.
(JB)	Striped Legless Lizard (Delma impar)	Size: up to 30cm long Habitat: grasslands Diet: moths, crickets, caterpillars and spiders.
	Grey-headed Flying-fox (Pteropus poliocephalus)	Size: body length 23-29cm, up to 1kg, wingspan to 1m Habitat: tree canopies Diet: fruit and nectar.
(IM)	Platypus (Ornithorhynchus anatinus)	Size: females (43cm), males (50cm), weight 1.5kg Habitat: streams and riverbanks Diet: worms, yabbies and insect larvae.





Wyndham City Civic Centre, 45 Princes Highway (PO Box 197) Werribee, Vic 3030



9742 0777



mail@wyndham.vic.gov.au



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