



Backyards for Biodiversity

A guide to creating wildlife friendly native gardens in the City of Canada Bay



City of
Canada Bay

The City of Canada Bay acknowledges the Wangal peoples, one of the 29 language groups of the Eora nation and the traditional custodians of this land. The City's Council pays respect to Elders past, present and emerging and extends this respect to all Aboriginal people living in or visiting the City of Canada Bay.





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Biodiversity is most simply defined as the variety of life on earth. Protecting and enhancing biodiversity is essential for the long-term sustainability of nature and our way of life. Despite being a highly urbanised area, the City of Canada Bay retains a surprisingly diverse range of plants (flora) and native animals (fauna). The local area is home to 159 different plant species including one vulnerable plant species, the Narrow-leaved Wilsonia (*Wilsonia backhousii*), and three endangered ecological communities:

- Sydney Turpentine-Ironbark Forest
- Coastal Saltmarsh in the Sydney Basin Bioregion
- Swamp Oak Floodplain Forest.



Studies have also found that there are:

- 11 species of native mammals
- 86 species of native birds
- seven native lizards
- one freshwater turtle and
- six native frog species.



This guide has been produced as part of the City of Canada Bay's Backyards for Biodiversity program. It contains information to help you improve the natural biodiversity of your gardens and provides tips on how to create a safe space for native fauna to feed and shelter. Use the plant guide as a starting point to choose the right trees, shrubs or ground coverings for your garden. If you would like some advice about your plans, please don't hesitate to contact Council at 9911 6555.

Note: This guide is for residential gardens only. It is not designed to guide the revegetation of natural areas and bushland. Planting in bushland and natural areas should be guided by Council's Bushcare team.



Planning your native garden

Most garden designs can be achieved using trees, plants and wildflowers found in Australia – whether you want a bush or cottage style garden, or a more modern look. Despite common perceptions, a native garden does not have to be dry and dull. There are many native plant species that can help you create a colourful and vibrant garden that is resilient and great for local wildlife.



Advantages of a native garden:

- **Suitable for the local environment** – local native plants are adapted to survive within the local climate. Once established, they require less watering and some can survive on just rainfall alone.
- **Provide food and a safe haven for local wildlife** – lots of local wildlife such as the superb fairy wren and the eastern blue-tongue lizard live on the urban fringe. By planting a native garden, you are extending their habitat and providing them with a 'stepping stone' to move between larger patches of bushland. With the right variety of native plants, you can expect to attract a variety of native bees and insects.
- **Save money and time** – native plants are low maintenance and, unlike exotic plants, require less fertiliser that can end up in our waterways. That means you can spend less time and money in the garden whilst contributing to creating a healthier environment.



Where to start

It's important to plan the design of your garden before you start planting and adding new materials. When planning your garden, here are a few things to consider:



Step 1: Understand the conditions of your garden space

- Sun and shade – take note of which areas get the most exposure to sunlight and the areas that are shaded. Different areas of a garden will provide different amounts.
- Soil type – knowing your soil type will ensure your plants thrive. Clay soils are usually sticky when wet, form large clumps and are harder to dig. Sandy soils are grittier, easier to dig through and drain water quickly.
- Moisture levels – ground moisture levels are usually a result of the type of soil you have, slopes or dips that collect water in wet seasons or how close soil is to a natural water source. Take note of the areas that get overly wet in winter and dry in summer.

Step 2: Assess the space

Think about the space you will need to accommodate the type and variety of plants you have in mind. Then assess the space you have available, taking note of existing paths, electricity lines and other plants or features that are staying. Start with less plants to see how big they grow, then you can fill in the gaps with a variety of other plants.

Step 3: Work with what you have

You don't have to remove all your existing plants and trees to create a thriving habitat garden, even if they are exotic. Incorporate a variety of native plants into your current design. If you feel there is already enough greenery in your space, consider adding an insect hotel, bird bath, gabion or a small frog pond.



Soil type

Australian soils are generally low in fertility and organic matter. The distribution of native plants you find within your local area is influenced by the type of soil commonly found in the area. Within the City of Canada Bay, there are three dominant soil types, each suitable for different plants. Once you determine your soil type, this will allow you to pick the right plants that will thrive in your garden.



Clay – fine textured and sticky when wet, they are slow draining with poor aeration but higher in nutrient content.



Sandy – gritty in texture, they drain quickly and have good aeration but have low nutrient content.



Silt/loam – in between clay and sandy soils, may contain small particles of pebbles and rocks.





How do I know what soil I have?

Your backyard soil may be a varying mixture of clay, sandy and silt/loam soil. To find out which exact soil you have, follow the steps below.

Step 1: Pick up a handful of soil and remove any large particles like stones and sticks.

Step 2: Squish it together firmly attempting to roll the mass to form a ball or sausage.

Results:

My soil stayed together – clay soil

My soil stayed together while I applied pressure only – silt/loamy soil

My soil broke apart and would not form a mass – sandy soil

Modifying soil conditions

- **Clay soils** – mix through compost and add gypsum to break down the clay. Aerate the soil with a garden fork and raise it by about 30cm.
- **Sandy soils** – mix through organic matter and keep well mulched.



Mulching

Mulching is an effective way to reduce weeds and retain moisture in soils whilst improving the appearance of any garden. For newly planted natives, mulching will simulate growing conditions in bushland where leaf litter forms a natural layer that encourages micro-organism activity. When mulching, remember to leave a 2cm gap around the stems or trunks as piling mulch against stems may cause a fungal infection or rotting.

Fertiliser

Most native plants thrive without fertiliser as they have adapted to survive in the current conditions and absorb what they need from the local environment. Adding fertiliser may sometimes harm the plants by burning the roots or making them weak. However, regular mulching and applying seaweed solution to your plants every two months after planting can be beneficial to improve soil structure and can have significant stimulatory effects on plant growth.

Pruning

Pruning is essential in your native garden as it controls pests and diseases, and stimulates new growth, making your plant lush and bushy. Prune up to a third of the plant after it has finished flowering to maximise its growth. Start by nipping the tops of the shoots with secateurs or fingers. The more you prune the more compact and dense the plant will get.

Watering

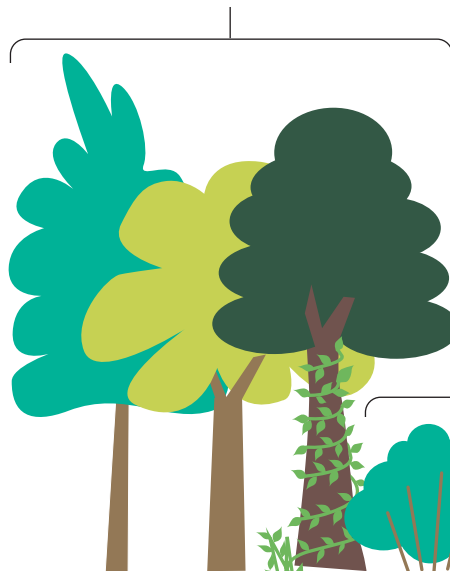
Plants that have just been planted will require frequent watering while they establish in the ground. Aim to water heavily once a week to encourage stronger root growth and to build great drought tolerance. Do this for six to eight weeks and once the plants are established watering can be less frequent.



Attracting wildlife

A good native garden will often attract a variety of birds, insects, reptiles and maybe even frogs and other small animals. You can encourage wildlife to take refuge in your garden by planting native plants that provide shelter and food throughout the year. Aim to create different vegetation layers for shade and shelter. Adding new plants from time to time will help to increase diversity.

Canopy – the top layer is made up of tall trees and large shrubs with a single sturdy trunk.



Mid-storey – the middle layer is made up of shrubs which are smaller than trees and usually have many stems, making it dense. They provide refuge for small birds and animals.

Under-storey or groundcover – these are low growing plants that spread at soil level, climbers or grasses. They help reduce erosion, reduce weed growth and act as living mulch for larger shrubs.





Creating living spaces

Birds – to attract small native birds into your garden, plant a variety of dense native shrubs with prickly foliage that provide different types of food (seeds, fruits, nectar and insects). Dense spiky shrubs provide a refuge for small birds from predators. Providing a water source by placing a small bird bath near the shrubs will encourage birds to visit your garden, especially in summer months.

Bees, butterflies and beneficial insects – insects are essential to gardens as they play an essential role in pollination, control pest population in your garden and are a source of food for other fauna. Installing an insect hotel helps attract native pollinators such as the blue banded bee, lacewings and wasps. The best way to attract insects is to plant a variety of plant species as food sources, keep leaf litter for insects to live in and don't use pesticides.

Reptiles – debris like leaf litter, bark, hollow logs and rocks are great shelters for lizards. They need basking points such as paving or rocky walls at a sunny spot in your garden that is also close to shrubs that they can crawl into when danger is present. They rely on ground cover and small shrubs to forage for food.

Mammals – adding a nesting box to your garden will provide mammals like possums and sugar gliders with a home away from your roof. Large trees (Eucalyptus species) and shrubs (Grevilleas and Bottlebrushes) provide a great food source for native mammals.





How to plant

Native plants often take a while to settle after being planted. To make sure they get a great start follow these 5 easy steps:



Step 1: Digging the hole

Dig a hole and ensure it is deeper than the container your plant comes in. It should roughly be twice as deep and twice as wide as the container. Loosen the wall of soil around the edge of the hole if it's too compact. This will allow the roots to spread, push through and grow.



Step 2: Water the seedling

Water the seedling well before removing it from the container it comes in. This will make it easier to get the plant out as a whole. An easy way to do this is to soak the container (without submerging the leaves) into a bucket of water for a couple of minutes.





Step 3: Removing the seedling

For small to medium pots, release the plant from the container by holding it upside down. Tap or squeeze the bottom gently to release it while holding the soil in place. Do not try to pull small plants out of the pot by its leaves or stems as it will break it. To release larger plants, tilt the pot, tap the bottom and gently ease out the plant whilst holding on to the base of the stem for support.

If the roots are twisted tightly around the soil, gently loosen them up as natives are sensitive to root disturbance.



Step 4: Planting

Place the seedling in the hole then push soil back into the hole around it, making sure all gaps are covered. Push down firmly on the soil, water the plant and spread mulch around the plant, making sure to leave a 2cm gap from the stem or trunk to avoid rotting or fungal growth. If possible, use aged mulch to avoid losing nitrogen from the soil.



Step 5: Watering

Newly planted seedlings need to be soaked with water. Another good soaking with the addition of seaweed solution encourages the roots to become stronger by growing deeper and reduces evaporation.

After planting, water the seedling once a week for six to eight weeks.

If planting in pots or in hot windy conditions, please water more often. Even though most native plants can tolerate dry conditions, newly planted seedlings should be watered well while they are establishing.

What plants to choose for your habitat garden

Conditions in every backyard are different so make sure you choose plants that are suitable for your soil type and location.

On the following pages is a list of native trees, shrubs, ground coverings and grasses that are recommended for the local area.



Key



Spring



Summer



Autumn



Winter



Any soil



Sand



Clay



Dry, well drained soil



Bees



Nectar eating birds



Seed eating birds



Butterflies



Other insects



Lizards



Frogs



Mammals



Caterpillars



Sun



Partly shaded

































Shaded



























































Trees






































































Plant name	Physical features	Flowering time	Attracts wildlife	Size (metres)	Position	Soil type	Other attributes
Dwarf Apple <i>Angophora hispida</i>	A small spreading evergreen tree with cream nectar rich flowers, rarely grows taller than 4m		  	Height: 4-7m Width: 3-5m			Low maintenance
Grey Myrtle <i>Backhousia myrtifolia</i>	A small evergreen tree with cream coloured flowers and cinnamon scented foliage		  	Height: 3-7m Width: 2-5m	 		Will tolerate most soils but likes it deep; foliage can be used for cooking in place of cinnamon
Old Man Banksia <i>Banksia serrata</i>	A medium sized tree with leathery serrated leaves and creamy to brown large flowers	 	   	Height: 3-15m Width: 2-4m			Low maintenance
Coast Banksia <i>Banksia integrifolia</i>	A slow growing tree with leathery dark green leaves and nectar rich yellow flowers	  	   	Height: 4-15m Width: 1-6m			Low maintenance garden; faster growing than other Banksia species



Shrubs










































Plant name	Physical features	Flowering time	Attracts wildlife	Size (metres)	Position	Soil Type	Other attributes
Gossamer Wattle <i>Acacia floribunda</i>	Fast growing evergreen shrub with abundant pale cream flowers		  	Height: 4-6m Width: 2-3m	 		Useful for controlling erosion and often used as a hedge or wind breaker
Sydney Golden Wattle <i>Acacia longifolia</i>	An upright and spreading evergreen shrub with golden yellow flowers		  	Height: 4-8m Width: 2-3m			Low maintenance, often used as a hedge or screen
White/Flax Wattle <i>Acacia linifolia</i>	A perennial shrub with fine leaves and cream flowers		   	Height: 2-5m Width: 2-4m	 		Fast growing shrub that requires regular watering; bird nesting plant
Myrtle Wattle <i>Acacia myrtifolia</i>	A medium red stemmed shrub with clusters of cream flowers		  	Height: 1-3m Width: 2-3m			Low maintenance, widespread shrub
Silver Banksia <i>Banksia marginata</i>	An evergreen broad domed shrub featuring large yellow flowers and green leaves with silver undersides	  	   	Height: 1-2m Width: 1-2m	 		Suitable for low hedges and forms a good rounded shape; pruning will result in a denser shrub
Honey Pots <i>Banksia spinulosa</i>	Dense and compact shrub with golden flowers	   	   	Height: < 1m Width: < 1m	 		Low maintenance and can be easily pruned to smaller sizes
River Rose <i>Baurea rubioides</i>	A low growing plant with pink flowers and can be easily grown in pots	   	 	Height: < 1.5m Width: < 1m			Grows best in shady spots; needs moist soil

Shrubs

Plant name	Physical features	Flowering time	Attracts wildlife	Size (metres)	Position	Soil Type	Other attributes
Coffee Bush <i>Breynia oblongifolia</i>	Evergreen erect shrub with small green pendulous flowers and pink fruit	   	     	Height: < 2.5m Width: < 2m	 		Prefers well composted soil; frost and drought tolerant
Sweet Bursaria <i>Bursaria spinosa</i>	A hardy shrub with small sweetly perfumed, white flowers		     	Height: 1-4m Width: 1-3m	 		Low maintenance and fast growing; grows well in well drained soil; great shelter for small birds
Native Fuschia <i>Correa reflexa</i>	A hardy shrub that produces pink, red or yellow flowers through the year	   	     	Height: < 1.2m Width: < 1m	 		Low maintenance and tolerates extended dry periods once established
Eggs and Bacon <i>Dillwynia retorta</i>	Commonly found pea flowers with yellow and red flowers		     	Height: 1-3m Width: 1-3m			Prefers a light well drained soil in an open sunny position
Silky Grevillea <i>Grevillea sericea</i>	Easy care medium sized shrub with spider shaped pink flowers	   	     	Height: 1-2m Width: 1-2m	 		Low maintenance and responds well to regular pruning
Silky Hakea <i>Hakea sericea</i>	Large shrub that produces fragrant flowers well in winter		     	Height: 1-5m Width: 1-3m			Dense and fast growing; suitable for hedges




































































Shrubs

























































Plant name	Physical features	Flowering time	Attracts wildlife	Size (metres)	Position	Soil Type	Other attributes
Australian Indigo <i>Indigofera australis</i>	An ornamental shrub with pink to purple blooms		   	Height: 1-2m Width: 1-2m	 		Leaves and stems can be used as natural yellow dye
Tick Bush <i>Kunzea ambigua</i>	Medium shrub with bundles of white flowers		   	Height: 1-5m Width: 1-3m	 		Good for screening, informal hedging and for low maintenance areas; responds well to pruning
Copper Glow Tea Tree <i>Leptospermum polygalifolium</i>	A hardy plant with arching branches clothed in copper coloured foliage and white flowers		  	Height: 2-3m Width: 2-3m	 		Suited for informal hedging and screening, as well as a contrast shrub for other plantings
Honey Myrtle <i>Melaleuca thymifolia</i>	A dense mounded shrub with small leaves and clusters of attractive and intricate purple flowers	   	   	Height: 1-2m Width: 1-2m			A low growing hedge that requires little maintenance; great for shrubberies or as a pot
Thyme Honeymyrtle <i>Pultenaea microphylla</i>	Shrub with tiny narrow leaves and pretty yellow and red pea-type flowers	  	  	Height: 1-2m Width: < 1m			Frost tolerant plant that prefers well drained soil



Herbs, Ground Covers and Scramblers

Plant name	Physical features	Flowering time	Attracts wildlife	Size (metres)	Position	Soil Type	Other attributes
Apple Berry <i>Billardiera scandens</i>	Tough and adaptable climber that produces pink and white flowers	   	   	Height: <1.5m Width: 1-3m	 	 	Suitable for screening, and works well as a dense groundcover for landscape or garden use and can be successfully grown in containers and hanging baskets
Headache Vine <i>Clematis gycinoides</i>	A woody stemmed vine with white flowers		  	Height: 2-3m Width: 2-3m			It will grow as a ground cover where there are no adjacent plants to grow up on
Kidney Weed <i>Dichondra repens</i>	A creeping plant that spreads widely	   	  	Height: <0.3m Width: 1-5m			Can be used as a soft lawn alternative which doesn't need mowing, but will not stand up to hard traffic
Love Creeper <i>Glycine clandestina</i>	A fine open twining herb with long stems and flowers all year round	   	  	Height: <0.3m Width: 1-5m			Attractive light climber for gardens, on fences and logs; very hardy when established, and responds to pruning
Mystic Marvel <i>Hardenbergia violacea</i>	A hardy climber or groundcover plant that flowers profusely in spring		  	Height: 2-3.5m Width: 2-3.5m	 		
Beard Grass <i>Opismenus aemulus</i>	Creeping and matting grass that can form a thick ground cover in shaded areas		  	Height: <0.3m Width: 2-3m			Suitable for no mow lawns
White Root <i>Lobelia purpurascens</i>	A small herb with white to pale purple flowers	 	  	Height: <0.2m Width: <0.5m			
Native Violet <i>Viola hederacea</i>	Ground cover and lawn substitute with round leaves and purple and white flowers held above the foliage	   	  	Height: <0.2m Width: <1m	 		Can be used for a lawn substitute if it doesn't get much foot traffic

Grasses

Plant name	Physical features	Flowering time	Attracts wildlife	Size (metres)	Position	Soil Type	Other attributes
Wallaby Grass <i>Rhytidosperma bipartita</i>	Blue-green grass with pale green to white fluffy flowers	 		Height: <0.12m Width: <0.9m			Should be cut back periodically to encourage new growth
Flax Lily <i>Dianella longifolia</i>	A narrow-leaved form of Dianella with yellow and purple flowers		 	Height: <1m Width: <1m	 		It can be cut back to ground level if the plant gets untidy and will re-shoot from its underground rhizomes
Right Angle Grass <i>Entolasia marginata</i>	Straggling or shrubby wiry rhizomatous perennial	   	   	Height: <1m Width: <1m	 		Can grow up to 0.8m tall when freestanding, but may even reach in excess of 2m tall when supported by other plants
Mat Rush <i>Lomandra longifolia</i>	A hardy perennial with scented yellow flowers	 	   	Height: <1m Width: <0.6m	 		Tolerates dry spells but regular watering will stimulate new growth; can be used as an indoor plant
Tussock Grass <i>Poa affinis</i>	Perennial grass with highly ornamental needle-like blue/grey foliage	 		Height: <1 m Width: <0.5m	 		Ideal for gardens, borders, rockeries; drought and frost tolerant
Kangaroo Grass <i>Themeda australis</i>	Textured foliage with rusty red flower head	 	   	Height: <0.5m Width: <0.6m	 		Use it as a lawn substitute for small areas where it will not receive excessive foot traffic or as an unusual border plant at the front of a bed
Grass Tree <i>Xanthorrhoea spp.</i>	Slow growing perennial with a tuft of long thin leaves	  	   	Height: 0.2-5 m Width: 1-2m	 		Requires well drained soil in full sun to lightly dappled shade; in heavier soil it is advisable to build up raised beds for better drainage

What you can do if you don't have a garden

Don't have a backyard to support local wildlife? You can still do your little bit to help improve biodiversity in the City of Canada Bay.

- Keep domestic pets from roaming freely in protected bushland as weeds can often spread through seeds sticking to their fur.
- Ensure that dogs are on leashes in bushland, along the foreshore and other areas where native animals are likely to be vulnerable.
- Keep cats indoors overnight and particularly at dawn and dusk. Cats instinctively hunt small native animals like possums and birds, which are usually targeted at dawn and dusk.
- Take part in caring for the environment. Council runs a Bushcare program and a litter clean up program that operates in different parts of the City of Canada Bay.
- Plant dwarf native varieties in pots instead of exotic plants. Your small pot of native plant can provide food for useful insects like butterflies and bees.
- Get involved in citizen science by recording what you find and see in the local area. Visit Atlas of Living Australia's or Birdlife Australia's website for more information on how to get involved.



Acknowledgements and references

Canterbury Bankstown Council's Your Native Garden Guide

cbccity.nsw.gov.au/environment/biodiversity/native-plants

Habitat Network

habitatnetwork.org

Birds in Backyards

birdsinboxyards.net

Backyard Buddies

backyardbuddies.org.au

Gardening with Angus

gardeningwithangus.com.au

Australian Native Nursery

australiannativenursery.com.au/growing-australian-native-plants

NSW Government Biodiversity Conservation

environment.nsw.gov.au/topics/animals-and-plants/biodiversity





Get involved

There are many dedicated groups that play an important role in helping restore and protect the environment. Please visit Council's website to find out more about the following groups:

Canada Bay Bushcare

Bushcare is a volunteer program that enables community members to participate in the restoration, enhancement and maintenance of natural areas within the City of Canada Bay.

Love Your Place

A Council supported litter clean up program that encourages community groups, residents, local businesses and schools to get involved in the preservation and enhancement of the local area.

River Keeper Network

The Riverkeeper Network is made up of individuals, community groups and organisations who care for the health of the Parramatta River and surrounding catchment.

Participate and Learn

Getting involved in citizen science initiatives offers non-scientists the chance to contribute to research projects that can help inform future decision-making. Council works with organisations like Birdlife Australia to encourage residents to get involved in the annual Backyard Birdcount. Visit Council's website for more information.

To find out more about Council's Backyards for Biodiversity program visit canadabay.nsw.gov.au



Other resources

There are many courses, books and online resources about gardening with native plants and creating wildlife friendly gardens. Here are a few useful resources that will help you learn about native plants and gardens for wildlife.

Native planting:

Robinson, Les (2003)

Field Guide to the Native Plants of Sydney,
Simon & Schuster, NSW

Stewart, Angus & Bishop, A.B. (2015) *The Australian Native Garden: A Practical Guide*,
Murdoch Books Australia, NSW

Australian Native Plants Society (Australia)

anpsa.org.au

NSW Flora Online

plantnet.rbgsyd.nsw.gov.au

Sustainable Gardening Australia

sgaonline.org.au

Native wildlife habitat:

Bishop, Andrea (2018)

Habitat: A Practical Guide to Creating a Wildlife-Friendly Australian Garden,
Murdoch Books, NSW

McKee-Orsini, Michele (2018)
Handmade Bird, Bee, And Bat Houses: 25 Beautiful Homes, Feeders, And More To Attract Wildlife Into Your Garden,
CICO Books, London

Birds in Backyards

birdsinyourbackyards.net

Habitat Network

habitatnetwork.org

Backyard Buddies

backyardbuddies.org.au

Aussie Bee

aussiebee.com.au/beesinyourarea.html





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