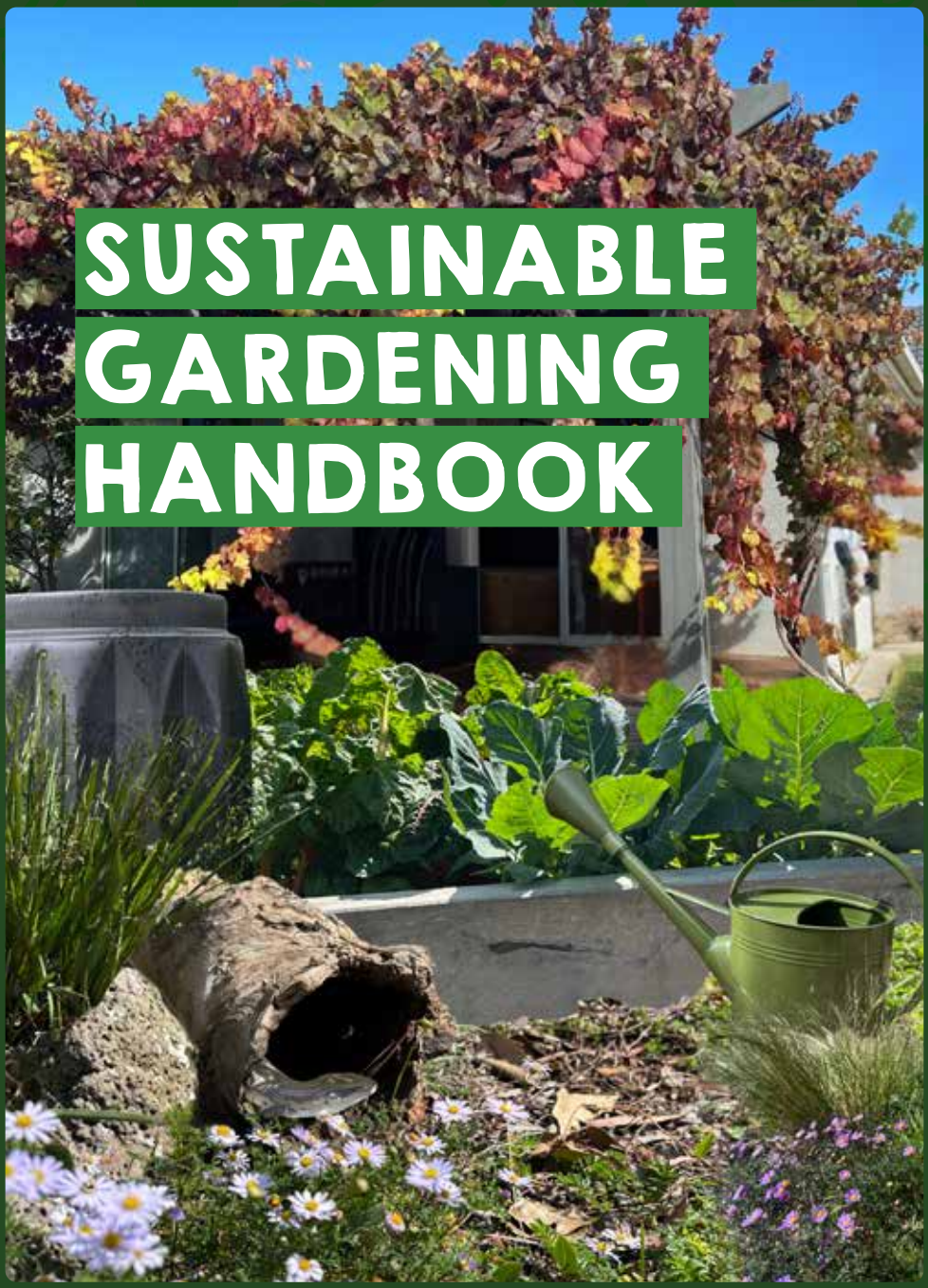
SUSTAINABLE GARDENING HANDBOOK



mysmartgarden.org.au

my smart garden

HOBSONS BAY CITY COUNCIL

My Smart Garden acknowledges the Wurundjeri, Bunurong and Wadawurrung people as the Traditional Owners of the lands and waterways, and we pay our respects to their Elders past and present.

v1.0 March 2026

My Smart Garden is a proud collaboration between City of Moonee Valley, Maribyrnong City Council, Hobsons Bay City Council, Brimbank City Council, City of Stonnington, Wyndham City Council, City of Yarra, Merri-bek City Council, Glen Eira City Council and Mornington Peninsula Shire.

This booklet contains adapted and modified sections of earlier publications by Sustainable Gardening Australia (sgaonline.org.au) and City of Darebin.

Photo and illustration credits: Kat Lavers, Rebecca Kootstra (p1), Amy Piesse Photography (p2, 7), Amanda Cuyler (p5), Sustainable Gardening Australia (p18, 19, 49), Hobsons Bay City Council (p23-25, 27, 65-73), Rob Gration (p25), City of Casey (p28), Conservation Regulator and Wildlife Victoria (p34), Catie Payne (p36-38, 40-41, 43), City of Melbourne (p42) and Make Every Drop Count (p47).

TABLE OF CONTENTS

In their Altona rental unit courtyard, Rabea and Steve learned to grow all their herbs and salad greens in four square metres with just 18 months' experience and a little support from My Smart Garden

Hi there!

My Smart Garden is a free sustainable gardening program to help you grow a beautiful and productive garden in your space, whether it's a few pots on a rental balcony or a larger suburban backyard.

The program is tailored for Naarm/Melbourne gardeners, so you'll get to know your gardening community and learn from local experts who understand your climate and conditions.

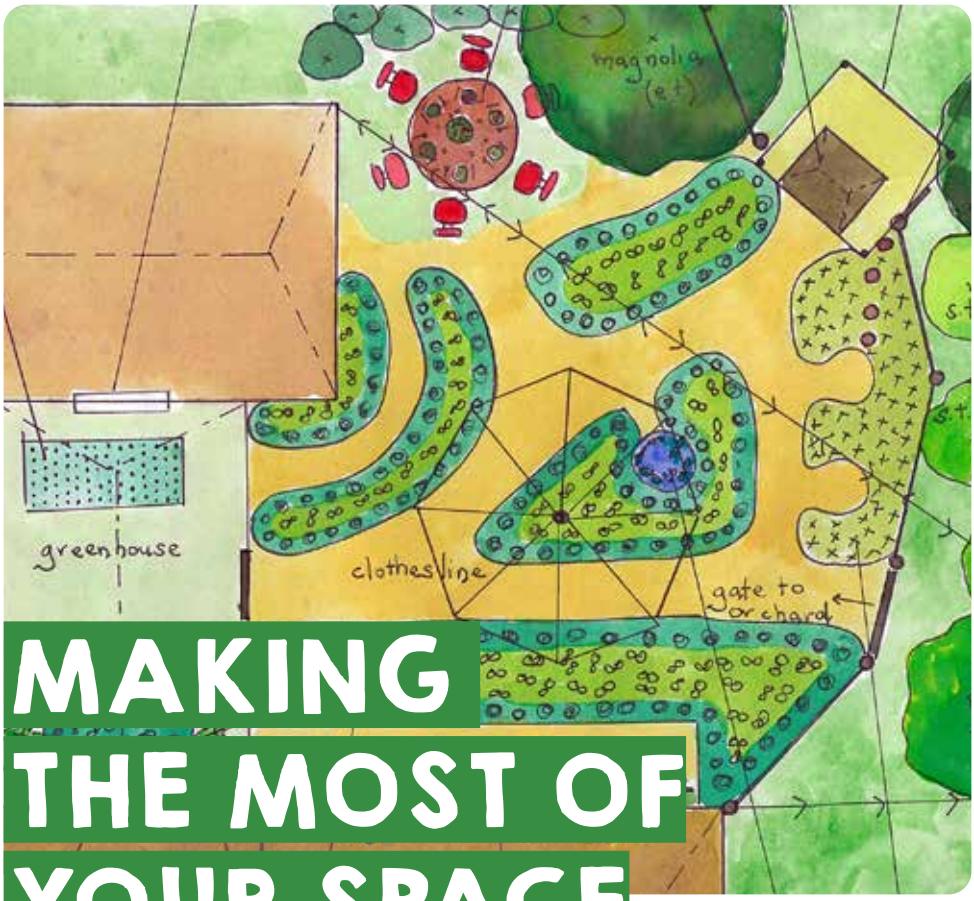
A 'Smart Garden' can grow food, shelter your home, create habitat, use water wisely and recycle waste. Essentially it's about using clever design to make the most of your space and resources. This handbook presents basic advice for each theme.

To learn more, you can:

- Sign up for our monthly newsletter and be the first to know about upcoming free events, plus handy seasonal gardening advice
- Join our free face-to-face and online events all year round
- Explore our online resources which include past event recordings and notes, how-to videos, as well as inspirational case studies from participants
- Follow us on social media to ask a gardening question or check out what's happening in the program. Tag your garden posts with @mysmartgarden to share what's happening in your garden!

We hope you enjoy the program,

The My Smart Garden team



MAKING THE MOST OF YOUR SPACE

Garden design doesn't have to be complicated. Simply taking the time to observe the space and a little bit of planning over a cuppa can save a lot of wasted effort later on.

Modern gardens are becoming smaller in size, and may have significant shading from nearby buildings. You may be limited to a balcony or nature strip. Many of us are renting, which requires permission, and sometimes extra creativity! It's absolutely possible to have a thriving, productive garden even with these limitations, but it does require careful design.

Invest the time to plan a garden that makes the most of the space you have, and suits your needs, soil and climate.

Rental gardens

Most renters can garden with permission from the landowner and/or portable solutions. Identify low cost techniques, solutions that can be relocated if necessary, plants that are easy to propagate, and fruits that are fast to produce.

Look out for rental-friendly solutions throughout this guide such as wicking pots (p7), removable options for shade and shelter (p38) and bucket composting (p59).

Nature strips

Many councils allow residents to garden on nature strips, providing some rules are followed for safety and sustainability. Contact your council to find out what is possible in your area.

Apartment gardens

Apartments have unique challenges, but you can design a thriving and productive garden even on a balcony or rooftop with careful design.

Is your space blasted by wind, exposed to a lot of sun, or perhaps shaded for most of the year? Complete a site analysis (see p8) so you can identify the microclimates and choose appropriate plants for the space.

If you're planning a garden with large planters or pots, it's important to check whether your balcony can safely accommodate the extra weight. Newer buildings should have structural documents that specify the load capacity per square metre, but for older buildings you may need to consult a structural engineer. The combined weight of pots, soil substrate, plants, water, furniture and people can be significant, so it's important to check and stay below the limit.

Also keep in mind other safety issues like securing garden trellises in strong winds, and the climbing risk of planters against balcony rails if children or pets are present.

Use trays under your pots to prevent staining or water runoff to lower levels which may upset your neighbours!

Check if there are any body corporate rules you must follow, and find out if you are able to garden in common areas.

Growing in pots

When it's not possible to grow in the ground, pots are a great alternative. Choose a size that you will be able to move if needed, but with a depth of at least 30 cm so it does not heat up or dry out too quickly and there are enough nutrients to sustain a healthy plant.

Self-watering or wicking pots are very useful for maintaining soil moisture during hot weather. You can create your own from a 10 or 20 L food grade plastic bucket which are often available at no charge from cafes and restaurants. Simply drill a 1 cm hole about 7 cm up from the bottom on the side of the bucket. Fill your pot with sandy soil or potting mix, and add some compost. Water until it starts to overflow from the hole. The base is now saturated and this water can be used by the plant as needed. Protect the plastic from sunlight to extend the life of the pot.

If you already have a pot with a hole in the base, you can put a plastic saucer that is 5 cm deep underneath it during hot weather for a similar effect. Water the plant and fill up the saucer before a hot day.

Community Gardens

If you don't have a suitable growing space at home, joining a community garden can be a good option. To find one close to you, ask your council or visit the Community Gardens Australia website. If you don't have a garden near you with membership availability, consider starting one!

Community Gardens Australia
communitygarden.org.au

Permablitz

Permaculture is a framework to design systems that protect and restore ecological health while providing for human needs.

A permablitz is a free event where people come together to install permaculture gardens, share skills, build community and have fun. When you've attended a couple of permablitzes, you are eligible to have a free garden design and host a permablitz.

Permablitz Melbourne
permablitz.net

GARDEN DESIGN TIPS

1. Create a vision for your garden. Think about why the garden is important to you and how you would like to experience it once complete. If this is a new home, take your time and learn how you interact with the space over a whole year if possible.
2. Write a wishlist and prioritise the elements you need. For example, a vegetable garden, fruit trees, habitat garden, shed, washing line, kid's play area, water tank and social space.
3. Measure and draw a basemap of your garden that is roughly to scale, or print out an aerial photo to draw on.
4. Conduct a site analysis to discover what is possible on your site, and issues to resolve. Draw bubbles to label areas with different sun conditions (e.g. full sun all year, shade in winter and summer afternoon sun) and other microclimates (e.g. strong westerly winds, peaceful sheltered spot). Locate downpipes, taps and drains. Identify issues like house exposure to summer sun, drainage or privacy. Note anything else that might be relevant like slope, soil type, views, major pests and weeds. Test your soil for contamination (see p12).
5. Always check your site on Before You Dig Australia to locate any services (water, sewer, gas, power etc), and check if any easements or overlays apply that may impact your design.

Before You Dig Australia
byda.com.au

6. Decide the location of your garden elements by referring to your vision, wishlist and site analysis. Start with the elements that are more constrained, then work your way through to other elements that are more flexible. For example, you might locate areas that can receive greywater (see p47) before positioning fruit trees. Decide the location of all the elements before getting into the details of any.

7. Do a rough budget for major items like a water tank (and pump if needed), shed, pergola, garden pots/beds, materials like mulch or compost, drip irrigation and plants. In many cases you can save money if you are willing to put in more time or effort sourcing secondhand materials or propagating your own plants. Check what is feasible and adjust your design if needed.

8. When you are ready, start getting into the detailed design and planning the implementation in stages. Collect photos of gardens that you like. Decide on a style and colour palette to create a coherant look for your garden. Visit your local specialist native and food plant nurseries for more advice and inspiration. Ask local gardeners for tips on what works well, and you might end up with some gifted seeds or plants to get you started!

HEALTHY SOIL

Healthy soil is the foundation for healthy plants and healthy people. Many urban soils are degraded, but soil health can be usually be restored (unless it is also contaminated, see p12). It's important to consider your soil before planting to help your garden grow and thrive.

Healthy soils have a dark colour, hold moisture, and have a pleasant earthy smell, lots of crumbs, and signs of life like roots and critters.

Soil is a mixture of mineral particles (sand, silt and clay), air, water and organic matter. 'Organic matter' refers to things that have lived before like leaves, twigs, food scraps and animal manures. These materials decompose into concentrated forms that give healthy soil its darker colour. While a small component of soils by volume, organic matter plays the most significant role in restoring and maintaining their health. Gardeners usually add organic matter in the forms of compost, aged manures or mulch.

As well as a source of 'food' for your plants, organic matter has many other jobs including improving soil structure, balancing pH, reducing plant uptake of heavy metals and feeding beneficial soil microbes. It also helps to repair 'hydrophobic' soils that are shedding water. Organic matter doesn't last and must be replaced regularly to maintain soil fertility.

Soil Improvement Tips

Check your soil type by taking a handful without any leaves, rocks or mulch. Moisten, then knead the soil in your hand for a few minutes until the consistency becomes even.

- If you can barely form a ball, then your soil is very sandy. Sandy soils have good drainage and aeration but may have poor water and nutrient holding capacity. Adding some clay may help.
- If you can mould it into long ribbons, then your soil is very clayey. Clay soils can have poor drainage and are prone to compaction but have high water and nutrient holding capacity. Adding sand to clay soil does not help as very large volumes are required. Most clay soils in Naarm/Melbourne are 'dispersive', which means their structure can be improved by adding garden lime (if pH is also low, see below) or gypsum.
- If your soil is somewhere in between these extremes, it is called a 'loam'.

The acidity or alkalinity of your soil affects nutrient uptake. Most plants prefer a range close to neutral of pH 6.5-7.5. You can test the pH of your soil at home using a colour test kit. If your soil is strongly alkaline (high pH), you can add elemental sulphur to reduce it. If your soil is strongly acidic (low pH), you can add garden lime (or wood ash from clean, untreated timber) to increase it. Do not use dolomite unless a laboratory soil test has indicated your soil also requires magnesium.

Soils have layers, also known as 'horizons', that can be observed as colour and texture changes with increasing soil depth. The 'topsoil' at the surface is the richest and most fertile soil. In nature, it takes between 100 and 300 years to form one centimetre of fertile topsoil, so it is a very precious resource. Don't mix topsoil with subsoil layers. Protect your topsoil when building or doing earthworks by scraping it into a covered pile, and spreading it back on the surface once works are complete.

Many common food plants prefer a rich soil for best productivity. It's easy to overfeed plants with chemical fertilisers, and too much fertiliser produces a lot of soft leafy growth that is preferred by pests. Synthetic fertilisers can also leach from the soil during heavy rain or watering, ending up in our waterways where they cause algal blooms. Instead, use compost and small amounts of organic fertilisers (such as blood and bone or poultry manure) as these make nutrients available over a longer period and provide many other benefits.

As a rule of thumb, spread a three to five centimetre layer of compost across your vegetable garden or pot (or about 30 to 50 L per 1 m2) and add a handful per square metre of organic fertiliser every time you plant annual vegetables. Incorporate gently with a garden fork, or spread on the surface under mulch when feeding perennial plants like fruit trees.

Soils that are compacted will benefit from aeration before planting. Use a levering action with a garden fork to gently decompact without inverting the soil. Very dense soils may be initially loosened by digging, but the structure of clay soils is easily damaged when wet so choose your timing carefully. Once established, minimise digging in your garden and instead loosen with the garden fork if necessary and focus on replenishing organic matter which will naturally maintain an open soil structure.

Maintain a layer of mulch about seven centimetres deep. This is enough to reduce soil moisture evaporation, insulate soil and suppress weeds, but will allow rainfall to reach your soil. Use wood or bark chip mulches for deep-rooted trees and native plants, and softer mulches like straw or autumn leaves for vegetable gardens and shallow-rooted trees like citrus and avocado. If your soil is dry, water thoroughly before adding mulch.

Create your own mulch from small prunings or finished crops using the 'chop and drop' technique. Simply cut into pieces that will lie in contact with the soil (usually 15 to 20 cm). Don't use this method if you have any serious pests or diseases in the plant material.

Most indigenous and native plants have evolved to grow in relatively infertile soil. If your soil is in poor condition, use an initial application of compost. Otherwise indigenous plants require an occasional wood or bark chip mulch only.

Soil Contamination

Soil can become contaminated with chemicals or heavy metals from materials like treated pine or old tyres, and historical sources like lead paint and leaded petrol. These can affect our plants and may also have human health implications from eating garden produce or working in the garden when contaminants are present at high concentrations.

GardenSafe is a free soil testing program run by the Environment Protection Authority Victoria that can provide you with more information on your home garden soil quality.

By sending in a sample, you can check levels of heavy metal contaminants like lead and arsenic, learn about safe gardening solutions, and contribute to valuable citizen science research on urban soils.

GardenSafe
epa.vic.gov.au/gardensafe


my
smart
garden
GROW FOOD
GROW
FOOD

Growing food is a valuable skill, and with practice you can produce fresh food at home for low or no cost.

Even small spaces like balconies can grow a useful amount of herbs and leafy greens that add flavour and nutrition to your diet.

Climate change is increasing the risk of natural disasters like drought, flooding and fire, which raise production costs and interfere with supply chains. A home food garden can improve our resilience by providing a buffer against cost of living pressures and supply disruptions.

Growing food at home using natural, low input methods also reduces our carbon footprint by avoiding greenhouse gas emissions associated with production, packaging, transport and waste from commercial agriculture.

Children love to watch their food grow, and may be more willing to eat produce that they have planted. Some crops like peas and berries are firm favourites with young green thumbs! Food gardens are a tangible and tasty pathway for children (and grown-ups!) to learn about nature.

Sharing produce, preserves and recipes brings people together. We may disagree on many things but everyone can agree on how much better tomatoes taste when they are homegrown and ripened on the vine!

Setting up your food garden

1. What type of food garden suits your household? If you only have a small space, focus on growing herbs and leafy greens which give the best yield from a small space. If you have limited time then fruit trees, herbs and perennial vegetables might suit you better than an annual vegetable garden which requires regular attention (see important plant terms on p37).

2. Your food garden needs the right amount of sun throughout the year. While many gardening references prescribe 'full sun', in our climate, this can be very stressful for food plants during hot weather, and increases the need for watering. Instead, try to give your food garden about six hours of sun in summer, and full sun for the whole day in winter. You can achieve this by siting deciduous fruit trees (e.g. plum, pomegranate) on the north, east and west sides of your patch to allow sunlight through in winter. Evergreen trees (e.g. citrus, feijoa, avocado) are best positioned on the southern side to prevent shading. Alternatively you could set up a temporary summer screen with star pickets and shade cloth.

3. If you have a choice of areas with enough sun, pick the spot where you will see your herbs and vegetables every day without making a special trip. This will make it easier to notice when pests are active or crops are ready. Areas close to the kitchen are best for convenience. Fruit trees and perennial vegetables require less attention and can be positioned further away.

4. Try to find flatter ground or at least level the surface of your vegetable beds to prevent water, soil and mulch from moving downhill. Gentle slopes are fine for fruit trees and perennial vegetables.

5. Use raised beds or pots if you have limitations such as soil contamination, physical constraints or rental requirements. Otherwise it is much cheaper and more sustainable to grow in-ground. Remember that soil can be easily improved (see p11).

6. Design access so you don't need to step on the garden beds. Clear paths will avoid compaction which damages your soil structure. Often this means an in-ground bed width of 0.9 m so that you can step over the bed, or a raised bed width of 1.2-1.5 m so you can reach the middle from both sides.

7. Wicking beds have a water reservoir in their base. They are very water efficient and require less frequent watering, which is helpful in exposed locations, if you are time poor or will be away during hot weather. Renters can buy self-watering pots or make DIY wicking pots (see p7).

8. Select fruits that crop at different times of year to spread out your harvest. Be sure to look up the harvest time for specific varieties that you are considering because some fruits have types that ripen in different seasons. Spring fruits include loquats, some brambleberries, some mulberries and some citrus. Summer fruits include plums, apricots, nectarines, peaches, some mulberries, some apples and some grapes. Autumn fruits include some apples, some grapes, figs, feijoa, cherry guavas, persimmons, pomegranates and quinces. Winter fruits include some apples and some citrus.

9. Perennial vegetables like asparagus, globe and jerusalem artichokes, wild rocket, rhubarb, perennial leeks, rocoto chillis and chokos require less maintainence than annual vegetables.

10. Many common weeds are edible, including purslane (Portulaca oleracea), chickweed (Stellaria media), nettle (Urtica urens), sow thistle (Sonchus oleraceus), fat hen (Chenopodium album), amaranth (Amaranthus species), mallow (Malva species), plantain (Plantago species), dandelion (Taraxacum officinale) and angled onion (Allium triquetrum). Be sure to identify these correctly and never harvest from sprayed or contaminated areas.

11. It can be tempting to buy larger plants, but smaller plants generally establish better and catch up quickly, and will save you money too. Avoid purchasing 'rootbound' plants that have outgrown their punnets or pots.

12. Seedlings and large seeds (e.g. broad beans) are easier for beginners. Check the correct planting season and follow the spacing advice on the label.

13. Try different types of each vegetable and work out which are the most productive varieties for your area. Ask local gardeners which are their favourites.

14. Look for substitutes that grow more easily. Choose silverbeet and perpetual spinach instead of English spinach, and try rocket and mizuna instead of lettuce.

15. With many leafy greens you can harvest the outside or oldest leaves, while the youngest leaves keep growing for future crops. Harvesting too early or overharvesting can stunt your plants, so always wait until the plant reaches a mature height, and leave at least six full sized leaves to maintain growth.

16. When you feel more confident, learn to save and plant your own seeds. Grow open pollinated varieties where possible (instead of hybrid, which are labelled 'F1'), as these will give you consistent results.

17. To increase your yield in a small space, plant small, fast growing crops (e.g. radish, leafy greens) between larger and slower crops. Make successive plantings of crops like beans and corn to spread out your harvest. Use climbing varieties on stakes, trellises and fences.

18. Create a garden diary or calendar to record planting and harvest times, pest and diseases and seasonal jobs so you can be proactive and prepared next year.

Bushfoods

Bushfoods are food plants that are native to Australia. They form an important part of the cultural heritage of Aboriginal and Torres Strait Islander people. These plants are better adapted to local conditions than most introduced food plants, and many are well suited to home gardens in Naarm/Melbourne.

Warrigal Greens
(Tetragonia tetragonioides)

A vigorous spreading groundcover. Leaves are a good substitute for spinach but are high in oxalic acid so should be cooked. Copes with hot, dry conditions but prefers a moist, well-drained position in sun to part shade.

Pigface
(Carpobrotus glaucescens)

A prostrate creeping succulent that is salt and wind tolerant Great in rock gardens or as a ground cover. Likes a well-drained spot with full sun to part shade and grows easily from stem cuttings. Leaves can be eaten raw, cooked or pickled. The fruits taste like a salty fig.

Murnong / Yam daisy
(Microseris lanceolata)

A perennial which produces a yellow dandelion-like flower and dies down to a tuber over summer. The white tuberous roots are edible raw or baked and the bitter leaves can be added to salads. Likes rich loamy soil with good drainage in full sun.

Coastal Saltbush
(Atriplex cinerea)

An evergreen shrub that grows to 1.5 m. Leaves have a salty taste can be eaten fresh in salads, cooked, or dried as salty seasoning. Saltbush is very drought tolerant and does not like over-watering.

Lemon Myrtle
(Backhousia citriodora)

A small tree with lemon scented leaves which can be used to make teas, or dried and ground to add fragrance to custard, shortbread and cakes. Prefers a partly shaded protected position.

River mint
(Mentha australis)

A small bush with a unique, strong minty flavour. Can be used fresh or dried for herbal tea. Leaves can be rubbed on the skin as a mild insect repellent. Prefers moist, fertile soils and can be grown in sun or shade.

Finger Lime
(Citrus australasica)

A thorny tree that grows two to three metres. There are many cultivars with a diversity in taste and fruit colours ranging from green, yellow, black, purple or red, which ripen winter through to spring. The caviar-looking fruit is delicious in drinks, desserts or garnishes. Like all citrus, finger limes like well-drained soil with a pH of 6 to 7.

Did you know?

While gardeners often plan according to a four-season European calendar, Aboriginal people of the Kulin Nations recognise as many as eight seasons, which are clearly observable through changes in weather, plants and animal behaviour. Each season has associated activities to match available resources and weather patterns.

To learn more about Aboriginal and Torres Strait Islander history, culture and perspectives on gardening and broader food systems, visit Growing on Country by Yuruwan

growingoncountry.com.au

Storing and sharing your harvest

Preserving can be as simple as freezing surplus fruit or hanging up small bunches of herbs to dry in your kitchen. Other methods like heat processing bottled fruit, blanching and freezing vegetables, or lacto-fermenting (e.g. sauerkraut) can extend your harvest and fill gaps in production.

As well as gifting produce to friends, family and neighbours, you can visit a local food swap to exchange crops with other gardeners in a friendly, social atmosphere. These are fantastic opportunities to ask for local advice and source varieties that grow well in your area. Many people also trade or gift produce using social media networks.

Ask your local food bank or charity if they welcome home garden produce. They might be able to put your surplus to good use helping people in need with limited access to fresh fruit, vegetables and herbs.

my smart garden

BUILD HABITAT

Habitat gardens

While they often go unnoticed, indigenous plants and animals are living alongside us in the city. Some have adapted well to urban areas, but others are critically endangered and at risk of extinction as their remaining habitat comes under increasing pressure. Habitat gardens support indigenous plants and animals by providing natural sources of food, water, shelter and breeding sites.

Habitat gardens are critical to conservation efforts because they create links between larger parks and reserves. The ability to spread or move safely through 'habitat corridors' enables greater species and genetic diversity, and adaptability to climate change. In return, we can experience many benefits. Habitat gardens:

- Grow easily in our local climate and soil types, and have greater drought tolerance, pest and disease resistance, and lower maintenance.
- Provide functions that support our food gardens, such as windbreaks, pest management and pollination.
- Support biodiversity, which is essential for clean water and air, successful food production and a safe climate.
- Gift us the joys of birdsong and frog calls, and watching the daily rhythms of our wild neighbours in our shared home.

Habitat gardens can be as small as a few pots with grasses and flowers to create a stepping stone for native insects, or a suburban garden with complex layered habitat for larger wildlife. They can be designed in a range of styles from wild and natural to more formal arrangements.

You can create a general habitat garden, or provide a home for specific types of wildlife. Even underplanting existing trees with ground covers and grasses will have an impact. Every little bit counts!

Native or indigenous plants?

'Native' refers to plants that naturally occur anywhere in Australia, while 'indigenous' plants naturally occur within our local area.

Indigenous plants create our unique local ecosystems and are adapted to our local soil types and climate. It's important to grow them wherever possible because some species rely on a specific indigenous plant or animal for needs like pollination, food or breeding sites. Native plants from other areas can also become weeds that outcompete local indigenous species.

Indigenous plants should be grown from locally-collected seed to preserve genetic biodiversity.

For advice on what to grow, see the Indigenous Plant Guide for your local area (p64).

Design quality habitat

Habitat gardens are more than a collection of indigenous plants. To create quality habitat, it's important to provide continuous plantings with layers of vegetation from groundcovers, wildflowers and grasses to shrubs and trees. Layers will create range of niches to suit different species, as well as cover for wildlife to move safely through the garden.

Design the structure by deciding where you will place trees, followed by shrubs, and finally smaller plants. Then select specific indigenous plants and features that meet the food, water and shelter needs of the wildlife you wish to attract.

Birds

Gardens with lots of open space and a simple structure with only lawn and trees favour common and often aggressive birds (e.g. Indian/ Common Mynas). Gardens with many layers attract a more diverse range of birds. Dense or prickly shrubs create safe shelter for many small birds. Tree hollows or nesting boxes are often required by larger species.

Provide a pond as a permanent water source if possible (see p24), or alternatively a safe water source like a hanging bird bath near a dense or prickly shrub. (All water sources should have protruding branches, rocks or logs to help wildlife safely enter and exit.) Grow a range of indigenous plants to supply seeds, nectar and fruits.

Encourage insects (see p26) and worms with leaf litter and mulch. Fluffy seed heads, grasses, bark, leaves, twigs, lichen, mosses, mud and spider webs will be gathered as nesting materials.

Tree hollows and nesting boxes

Many species like microbats, parrots and owls rely on hollows for nesting sites, but these can take hundreds of years to form and are disappearing from urban areas. If you have an old tree with dead limbs, a skilled arborist may be able to minimise the risk of falling branches while retaining stable branch stubs and the trunk. Some arborists can even create hollows with some clever chainsaw work! If you don't have any large trees nearby, consider installing species-specific nesting boxes with an entry designed to prevent unwanted guests.

Reptiles

Garden skinks, geckos and lizards often live in home gardens. Dense native grasses and small cracks, rock piles and logs (especially hollow) form ideal habitat. Provide a log, rock, tile or brick in a sunny location for basking.

Encourage insects (see p26) and indigenous groundcover species with small flowers and fruits as food sources. Provide a permanent water source like a pond or large water dish. (All water sources should have protruding branches, rocks or logs to help wildlife safely enter and exit.)

Frogs

Gardens without ponds that have long native grasses, permanent damp areas, rock, logs and plenty of insects (see p26) are still useful habitat for frogs. If you have space, a pond with still water and specific features will allow frogs to breed in your garden. Reliable water sources sustain all wildlife through hot summers, so including a pond will make your habitat garden a valuable haven for many other species.

Position your pond with partial sun all year, making sure it will receive three to four hours of sun in winter for adequate warmth. Look for areas with protection from afternoon sun in summer which can get too hot for frogs. The ideal spot will also be in a low traffic area, with permanently damp soil.

You can create your own shape using food-grade plastic pond liner, or use a pre-formed pond shell that can also be installed above ground in a frame with soil mounded around the edge where excavating is not possible. Larger ponds will maintain a more stable temperature throughout the year. The pond should have a boggy area at the edge for adult frogs, a shallow entry ramp for egg laying and an area that will remain at least 30 cm deep all year for tadpoles. Gently sloped edges and a heavy branch with one end on the bank and the other in the water will act as a 'ladder' to help frogs and other wildlife safely access the pond. Shelves of varying depths are useful to accommodate a wider range of species.

Don't add fish or install a pump, as both are dangerous for frogs and tadpoles. A scoop of water from an established freshwater pond (avoiding tadpoles, see below), and a diversity of indigenous aquatic plants will keep the water clean and control mosquitoes. Avoid floating aquatic plants like Duckweed (Spirodela oligorrhiza) and Azolla (Azolla filiculoides) as these can smother your pond and reduce warmth, oxygen and light levels. Surround the pond with rocks, logs, leaf litter or mulch, and a range of long grasses and other indigenous plants to provide safe habitat. Include some with soft foliage draping into the water for more food and habitat niches.

It is illegal to remove frogs or tadpoles from waterways in Victoria, but a correctly designed habitat garden near an existing frog population will usually attract them in time.

Keep children safe by fencing the pond, or install rigid stainless steel weldmesh to cover the surface.

Snakes

Snakes are important predators in our local ecosystems but understandably they often cause concern. Snakes are shy and will usually avoid people, but you can minimise the chances of a snake encounter by tidying up piles of tin or timber and avoiding long grass. Never try to catch or kill a snake. You are likely to be bitten, and it is illegal to kill a snake in Victoria. If you find a snake in your garden, contact your council for advice.

Butterflies

Butterflies need sheltered places to warm themselves in the morning sun, and cooler shaded areas to retreat during the hottest part of the day. Provide nectar sources with a range of simple, flat flowers. Blue, yellow and red colours are particularly attractive for many species. Butterflies need a muddy puddle, a boggy area or even a dish of damp sand to supply water and salts.

Bats and microbats

Grey-headed flying foxes, also known as fruit bats, are one of the world's largest flying mammals. They love eucalypt blossoms, but eat a range of other flowers, fruits and leaves. Flying foxes pollinate flowers and disperse seed over long distances, which maintains healthy native forests, and in turn protects habitat for many other species. They are also threatened and face significant challenges from climate change.

Always use wildlife safe netting (see p34) to protect your crops and prevent entanglement of flying foxes visiting your garden.

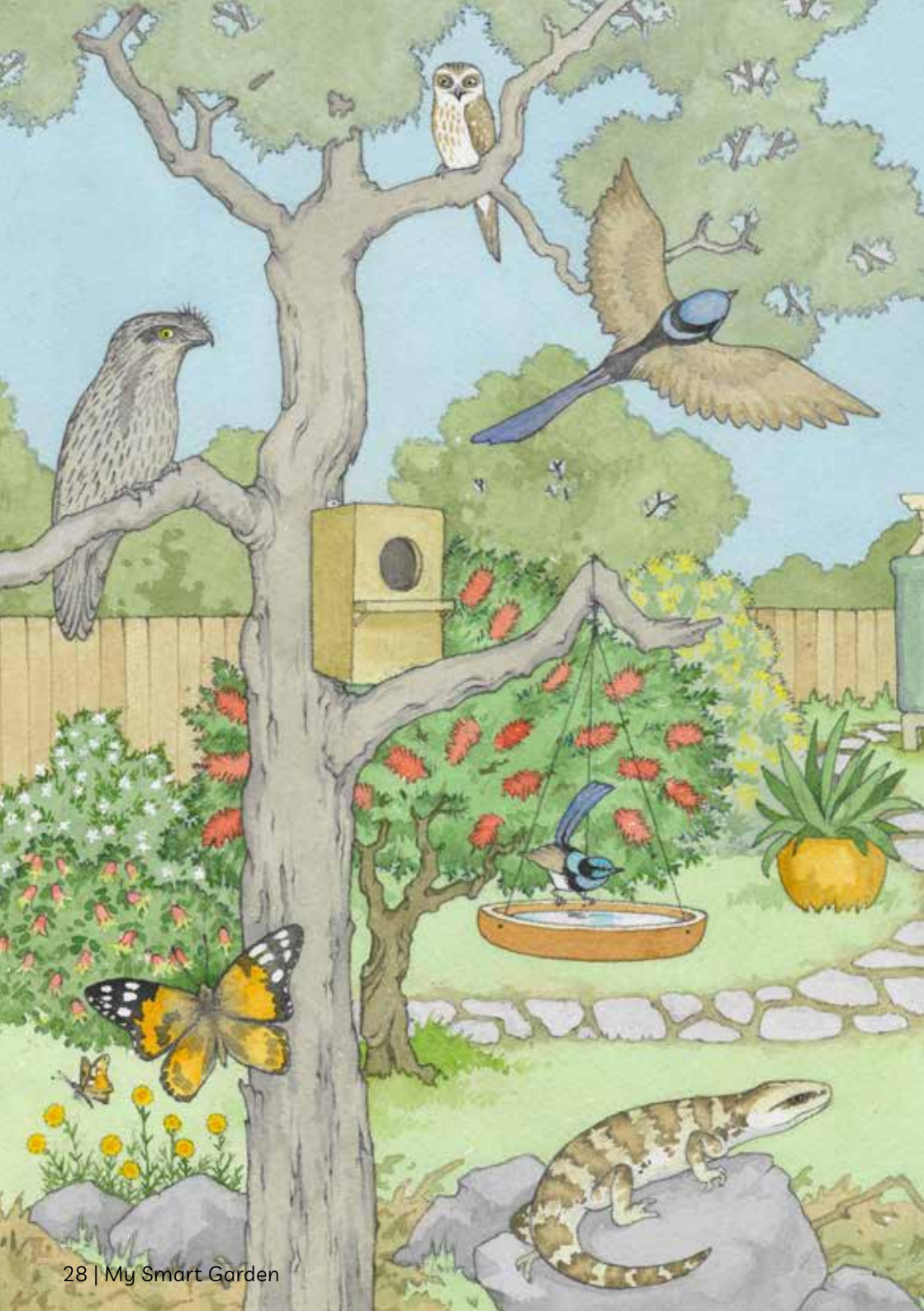
Victoria is also home to 23 species of microbat. These are very small bats that feed on insects like mosquitoes, moths, beetles, caterpillars and termites. Microbats can eat more than half their bodyweight each night, which could be over 1200 mosquitoes! Preferred habitat includes tree hollows, layers of bark or cracks and crevices of buildings. To support microbats, encourage insects (see p26) and consider installing nesting boxes (see p23).

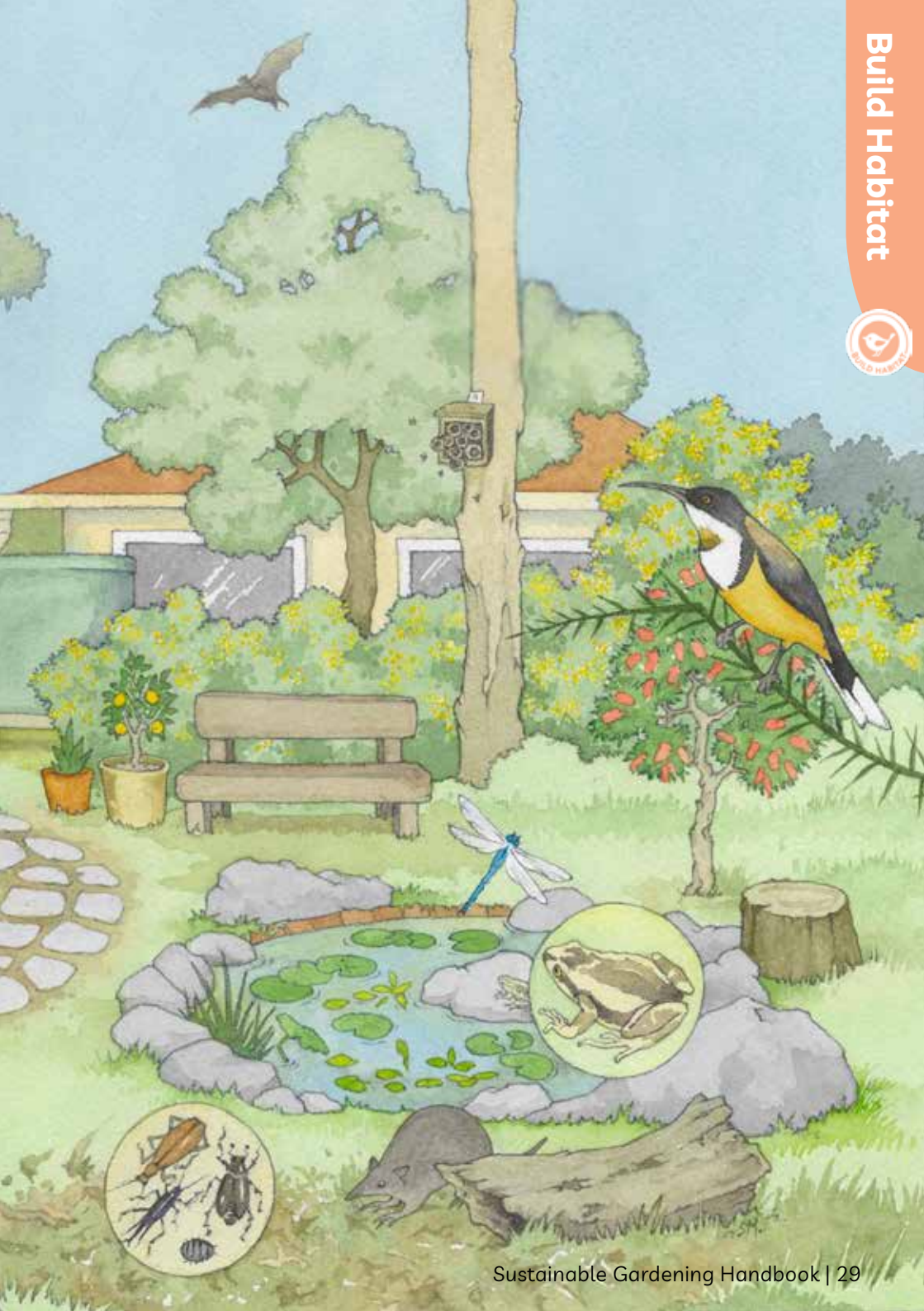
Insects

Insects and other small critters like native bees, hoverflies, beetles, slugs and spiders have important ecological functions as pollinators, predators, decomposers and as food sources for other wildlife.

Encourage insects by leaving some less-managed areas with a range of microclimates and nesting sites, including dead twigs, fallen bark and branches, timber with holes, hollow plant stems, rotting stumps and logs, and a range of undisturbed soil microclimates from bare, dry patches to cooler, damp areas with plenty of leaf litter or mulch. Grow a wide range of flowering plants to supply nectar. Use natural pest management (p32) to avoid synthetic chemical products. A permanent water source like a pond or water dish will increase the variety of species. (All water sources should have protruding branches, rocks or logs to help wildlife safely enter and exit.)

You can also make a 'hotel' for native bees and other insects by drilling three to nine millimetre wide holes that are deeper than 10 cm (with no splinters) in pieces of untreated wood, or using bundles of bamboo with hollow stems in these sizes. Position your insect hotel about 1.5 m off the ground in a location that is sheltered, sunny, and not too hot.





Establish your habitat garden

The best time to plant indigenous species is from autumn through to spring so they can establish before harsh summer conditions arrive.

Clearing everything at once may leave the wildlife that already visit your garden without shelter or food, increasing their vulnerability to predators. If a major transformation is planned, try to make the changes in stages, and replace plants gradually. You may need to remove lawn (see p52) or control weeds before getting started.

Most indigenous plants do not require fertile soil, so unless your soil is in poor condition generally only a bark or wood chip mulch is required (see p11). Once your plants are established, the natural leaf drop will usually be enough to maintain soil health. Provide deep, occasional waterings over the first summer if needed.

Do not collect logs, rocks or other materials from parks and reserves where they are already part of important habitat.

Start by planting a smaller area with lots of diversity and see what works best, then expand the most successful species down the track. You can even collect your own seed from the most successful species to propagate the next generation!

It's important not to use chemicals or other toxic materials in the garden because these harm wildlife (especially frogs). Avoid poison baits and use natural pest and disease management instead (see p32).

Replace weedy plants

Many common garden plants are also serious weeds that can escape into parks and reserves when seeds are moved by water, wind, animals or when garden waste is illegally dumped. Managing weeds is costly and reduces resources for revegetation programs, but without control, they can outcompete indigenous plants and leave wildlife without food or habitat. Do not plant weed species, and if you already have them in your garden, please replace them with indigenous plants that have a similar look (see p73).

Reduce light pollution

While artificial lighting helps people use outdoor spaces safely after dark, it can also mimic, mask or confuse natural light signals that wildlife rely on. Light pollution can lead to disorientation, disturbed sleep rhythms and encounters with predators. It can prevent or cause misiming of migration, breeding and feeding patterns, reducing habitat and affecting whole ecosystems. To protect natural darkness, only install garden lighting in areas that you really need it, prevent spilling or reflection into other areas and switch it off when not in use. Keep lights low in intensity and close to the ground, and choose warm colours (e.g. amber or orange) that are less disruptive to wildlife.

Responsible pet ownership

Research has shown that millions of native animals are killed each year by domestic cats, and even well-fed cats instinctively hunt. Containing your cat indoors at all times will keep wildlife safe, and also protect your cat from fights, diseases and accidents. If you want to give your pet outdoor time, a secure cat enclosure or 'catio' can be purchased or constructed.

Protect wildlife in heat

Heatwaves are stressful for wildlife, and sometimes cause animals to leave their usual nesting sites and wander at ground level where they are more vulnerable. You can help wildlife by designing your habitat garden to have cool, damp and shaded refuge areas, with safe access to clean, reliable water sources.

During extreme heat it's especially important to keep your pets secured to protect wildlife, with dogs on lead and cats indoors or in a contained, secure cat enclosure, especially at night.

If you find a wild animal that looks unwell, place water nearby and offer a mister/sprinkler, monitor them from a distance to avoid further stress, and if they do not improve contact Wildlife Victoria for advice.

Wildlife Victoria
wildlifevictoria.org.au

Natural pest, disease and weed management

Natural pest and disease management is an approach that avoids the use of synthetic chemicals that can be harmful to humans, pets and ecosystems.

Stressed and unhealthy plants are more susceptible, while strong and healthy plants are more resilient and can often tolerate and outgrow a pest or disease attack. Promote plant health by starting with a garden design and plant selection that matches your conditions, and by improving soil health (see p8 and 10).

Pests and diseases (especially fungal diseases) tend to thrive in sheltered and shaded pockets with high humidity. Good site selection, pruning and training can all improve air circulation and sunlight.

Most insects in the garden are neutral, and many are beneficial to our crops because they eat pests such as aphids, scale, leafminer, whitefly and caterpillars. Examples of beneficial predators include ladybirds, parasitic flies and wasps, hoverflies, lacewings, spiders and preying mantids. Synthetic pesticide sprays (especially broad spectrum types) often kill these allies as well. This prevents the predator population from developing and means you have to keep managing the pest instead!

Encourage beneficial predators by offering food and habitat. Most require nectar from small flowers such as daisies (e.g. calendula), umbels (e.g. parsley, fennel), or other small types (e.g. alyssum). Grow a diverse range and make sure you have flowers all year round, especially in early spring when many pests are emerging from winter dormancy. Leave some undisturbed areas for these predators to overwinter, or install an insect hotel (see p26).

You can't design an effective strategy without identifying the pest. Many pests are active after dark when there are fewer birds and humans, so you will often catch them in action by going out at night.

Some pests can be removed by simply handpicking off the plants. Other methods include netting (e.g. 2 mm insect guage for Queensland Fruit Fly and cabbage white butterfly caterpillars), homemade traps (e.g. beer traps for slugs and snails), and sprays (e.g. homemade horticultural white oil for aphids, leafminers and scale). If you have poultry, they can be run under fruit trees or in the vegetable garden before planting to clean up many soilborne pests. Floppy fences, wire cages or low voltage domestic electric fences are options to exclude possums.

Learn from previous years and try to reduce pest numbers before their breeding seasons. A little bit of regular maintenance is easier and more effective than occasional major efforts.

Look for varieties or crops that are more resistant. If a pest or disease is too difficult to manage using natural methods, it might make sense to stop growing it (temporarily or permanently) and focus on other crops.

It's much easier to manage weeds before you plant out a garden. Use techniques like solarisation or sheet mulching (p52) before planting, then use hand weeding to stay on top of any that pop up. Soil that is permanently covered by mulch or plants will suppress weeds naturally, so aim for full coverage and top up as necessary.

Remember that if you let weeds flower and produce seed, they will keep popping up for years, so weeds beginning to flower is a handy cue to pull them out fast!

Some weeds are edible and can be managed by harvesting as a bonus crop (see p16). Make sure you have identified them correctly and never harvest from contaminated areas.

Avoid importing or spreading pests and diseases by practicing garden hygiene and biosecurity. Inspect plants and produce that you are bringing in (and freeze or boil anything suspicious before composting).

If you have visited somewhere with known issues, take sensible measures like scrubbing your boots. Sanitise tools with methylated spirits diluted with 30 per cent water to avoid disease spread when moving between trees during pruning, and between gardens.

Always follow national and interstate quarantine laws which protect farmers and ecosystems from serious outbreaks that can be devastating for your garden too.

interstatequarantine.org.au

It's never a good year for everything! Each season brings its own mix of weather and pests (and disappointments!). Some crop damage or loss is to be expected. Diversity is your best defence. Design your garden with as much variety as possible so you can balance out failures in any particular crop.

Queensland Fruit Fly

Queensland fruit fly *(Bactrocera tryoni, QFF)* is a serious pest for home gardeners and farmers. QFF lay their eggs in most common fruits, as well as some vegetables that are botanically fruits like tomatoes and capsicums.

The fruit can appear normal on the outside, while inside the flesh will be rotting and filled with maggots. The larvae start very small, and grow to the size of a grain of rice. Adult QFF are hard to spot, but are about 7 mm long with a reddish-brown colour, and distinct yellow markings.

Insect grade netting or netting bags (2 mm gauge) placed on the tree after the fruit has set and secured tightly around the trunk or branch are the best defence for home gardeners. Prune trees to a size you can easily net, but don't remove more than a third of the canopy in a single year to avoid stressing the tree. Homemade and commercial traps can be used to monitor QFF presence and populations.

If you find infected fruit, do not put it in your compost system or food and garden bin until it has been boiled or frozen, or left in a plastic bag in hot sun for at least week to kill the larvae. Be cautious when sharing fresh fruit as you could spread QFF to new areas.

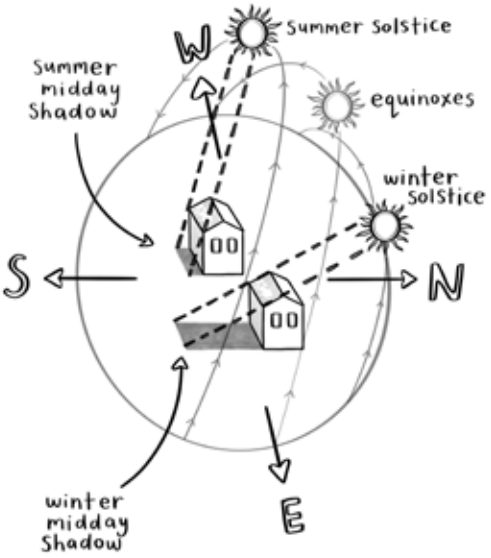
Wildlife safe netting

Netting is an important, chemical-free method to protect crops, but can also be a lethal trap for wildlife including birds, bats and lizards. In Victorian home gardens it is now illegal to use netting with holes larger than 5 mm when stretched. If you can put your little finger through it, don't use it! Also ensure the netting is secured tightly around the trunk of the tree to prevent wildlife from becoming entangled. (Replacing your old nets with 2 mm gauge insect netting will also protect your crops from Queensland Fruit Fly.)

You can create a 'habitat corridor' by encouraging your neighbours to plant gardens for wildlife and joining in local revegetation projects! Contact your council to find out what's happening near you.


my
smart
garden
CREATE SHELTER
CREATE
SHELTER

Our climate is becoming hotter and drier. Well-designed gardens can make our homes safer by sheltering us from extreme weather like heatwaves. Clever landscaping can change indoor temperatures by several degrees so you can stay comfortable and save money on your energy bills.



Homes in areas at risk of bushfire should also follow CFA Landscaping for Bushfire recommendations.

cfa.vic.gov.au/plan-prepare

Seasonal sun path and shadows

The sun rises eastwards and sets westwards every day, but due to the tilt of Earth's axis and our orbit around the sun, the apparent path of the sun and the exact location of sunrise and sunset change throughout the year. This effects the amount of sun, sun angles and the size of shadows.

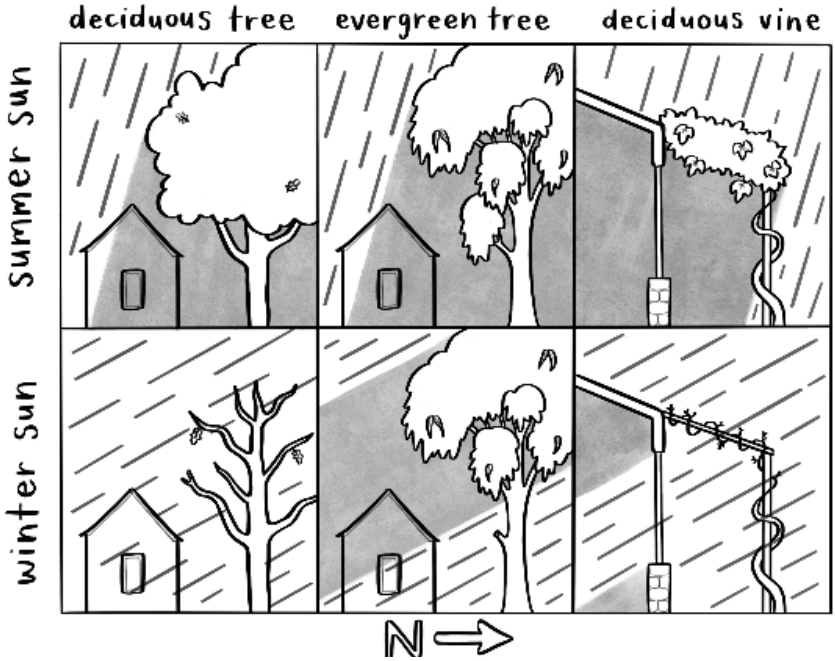
In Naarm/Melbourne:

- **Summer solstice** falls on approximately 21 December and is the longest day of the year. The sun rises from a position in the south east, follows a long arc up to 75 degrees and sets in the south west. This high arc creates small shadows.
- **Spring and autumn equinoxes** fall on approximately 21 March and 21 September. The sun rises exactly east, follows a medium arc halfway between the solstices (52 degrees), and sets exactly west.
- **Winter solstice** falls on approximately 21 June and is the shortest day of the year. The sun rises from a position in the north east, follows a short arc up to 29 degrees, and sets in the north west. This low arc creates long shadows.

By understanding seasonal sun paths and shadows you can predict where the sun will be at different times of the day and year.

Which walls and windows of your home receive direct sun in summer and winter?

Plant to modify sun



Planting to modify the sun on your building is one of the most effective steps you can take to make your home more comfortable. Correct choice and placement of plantings is important, as winter shading will increase your need for heating.

Plant deciduous trees, or vines on a pergola, to shade the northern side of the house from summer sun, while allowing entry of winter sun.

Where there is already a large established evergreen tree, an

Important plant terms

Deciduous plants shed their leaves every year. This usually occurs during cooler months with new leaves regrowing in spring.

Evergreen plants retain their leaves all year.

Annual plants (e.g. most common vegetables) complete their growing cycle and die in one year or less.

Perennial plants (e.g. most shrubs and trees) grow for three or more years.

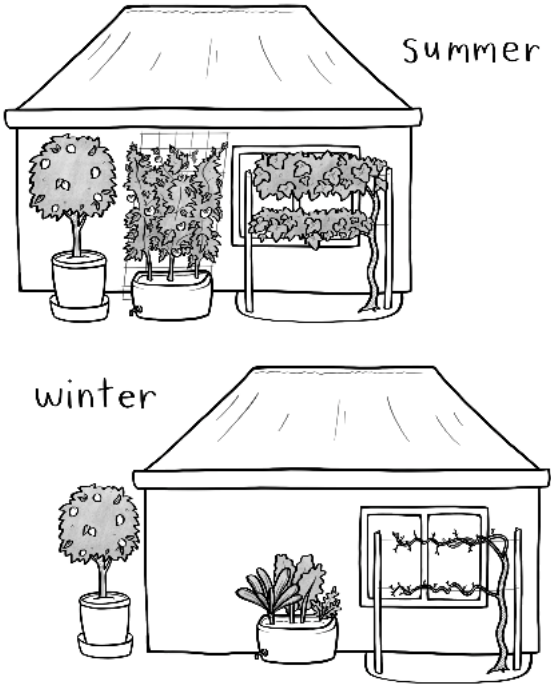
arborist may be able to 'lift prune' (remove some lower branches) to allow the low angle winter sun to reach your building.

Design deciduous plants to block sun right to the ground on the eastern and western sides of the house. This prevents summer sun from reaching walls while it is at low angles in the morning and afternoon. Hedges, a vine on a vertical trellis, or a combination of shrubs and trees can be used.

Avoid planting trees or vines directly against weatherboard houses or wooden fences to allow airflow and maintenance, and prevent structural damage.

Position evergreen trees on the southern side of the house, or at least three times their mature height away from the northern wall, to avoid blocking winter sun. Also consider the shading implications of large trees on your neighbours.

Renters can shade walls with tall summer annual plants that are self-supporting (e.g. sunflowers, corn, Jerusalem artichokes), or use removable structures like stakes or trellises (e.g. climbing tomatoes, peas and beans, cucumbers) or pot plants that can be relocated in winter if necessary. Perennial climbers that die back to a clump in winter (e.g. choko, hops) create fast wall coverage within a season, and are quick to reestablish if moved while dormant. Grapes (fruiting or ornamental) are one of the most useful deciduous vines in our climate, and can be propagated easily from cuttings taken in winter. They can grow in a pot for at least two years before replanting, so are fast to reestablish after moving with some advanced planning.



'Self-clinging' plants do not require a trellis and can create a low cost green façade to shade and insulate masonry walls, including double storeys, where there is no space for a tree. Deciduous climbers like Boston Ivy (Pathenocissus tricuspidate) can be used on north, east and west walls, and evergreen climbers like climbing fig (Ficus pumila) are useful on south walls. Note that ongoing maintenance will be required to trim vines from gutters, windows etc. Do not use these plants on weatherboards, wooden structures or other surfaces which are easily damaged or prone to rot.

Sun on light-coloured ground surfaces like paving or white rock mulches can create unpleasant glare, and reflect additional sun onto buildings. Glare can be reduced by replacing these surfaces with wood chip mulch or groundcover plants where possible, or shading during summer with a deciduous tree or vine on a pergola.

Where vegetation cannot be established for shade, alternative solutions are external blinds, eaves, pergolas with slats angled to block summer sun but allow winter sun, or removable shadecloth.

Hot and cold wind direction

In Naarm/Melbourne the hottest winds in summer are usually from the north and northwest. The coldest winds in winter are usually from the south or southwest, which is also the direction of summer 'cool change' winds.

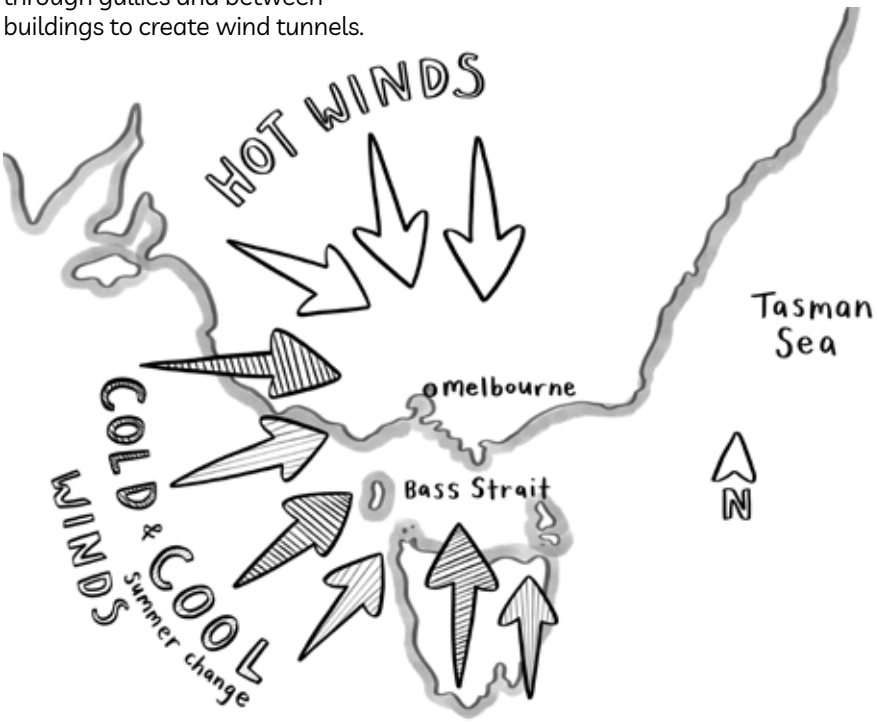
Note that these are different to the prevailing (or most common) winds, but are the most relevant when designing to modify temperatures. Wind speed and direction are also influenced by local topography. Wind speeds increase at the top of hills, and can be funnelled through gullies and between buildings to create wind tunnels.

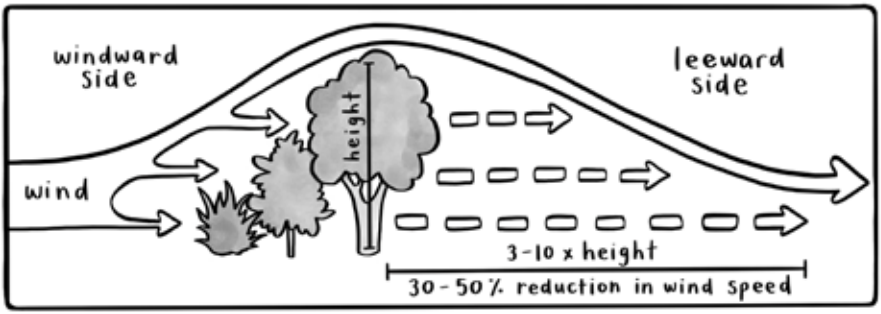
Effective windbreak design

Windbreaks reduce wind speed by 30 to 50 per cent on the leeward side, for a distance of about three to ten times their height.

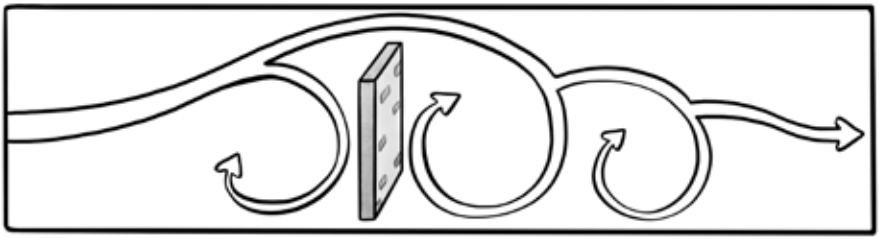
Solid barriers (e.g. buildings, walls) can generate greater turbulence on the leeward side, so permeable vegetation creates the most effective windbreaks.

Where vegetation cannot be established, permeable picket-style fences or shadecloth attached to star pickets can also offer protection from wind.





permeable barriers reduce wind speed without turbulence; non-permeable barriers create turbulence



Plant to modify the wind

Use windbreaks to reduce the impact of hot and cold winds on your home and garden.

Plant a windbreak of deciduous trees and shrubs to the north and northwest for protection from the hottest winds in summer.

Plant a windbreak of evergreen trees and shrubs to the south and southwest for protection from the coldest winds in winter. Leave a gap near a south-facing door or window to let in the 'cool change' winds and purge hot air from the house in summer.

Reduce summer heat

Reduce heat absorption in summer by shading thermal mass and increase moisture in the landscape to promote natural cooling.

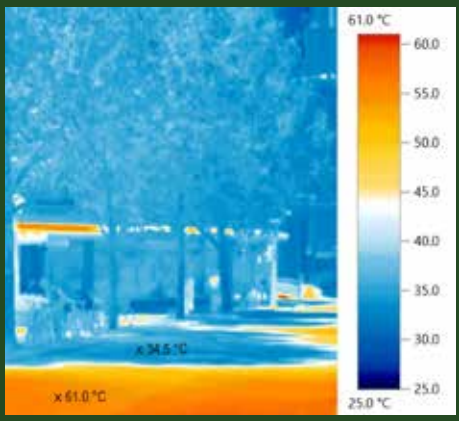
Use deciduous trees and vines to shade thermal mass like paving, brick, concrete and water tanks. Shading paved areas creates a more comfortable outdoor space in hot weather, which can be further cooled while in use with a misting system or fan if desired. In winter, thermal mass exposed to sun will create a warmer microclimate that is more comfortable for outdoor use. Consider removing areas of unnecessary concrete or paving that is exposed to summer sun.

Gardens with higher soil moisture are cooler in summer due to evapotranspiration, and retaining water onsite also reduces the risk of local flash flooding and contributes to healthier waterways. Use rainwater tanks, downpipe diversion and/or greywater (see p46) to improve your soil moisture. For paths and seating areas use permeable products like gravel, wood chips, or porous paving that allow rainwater to infiltrate.

Improving the health of your soil with techniques such as aerating, adding compost and mulch (see p11) will significantly increase water holding capacity.

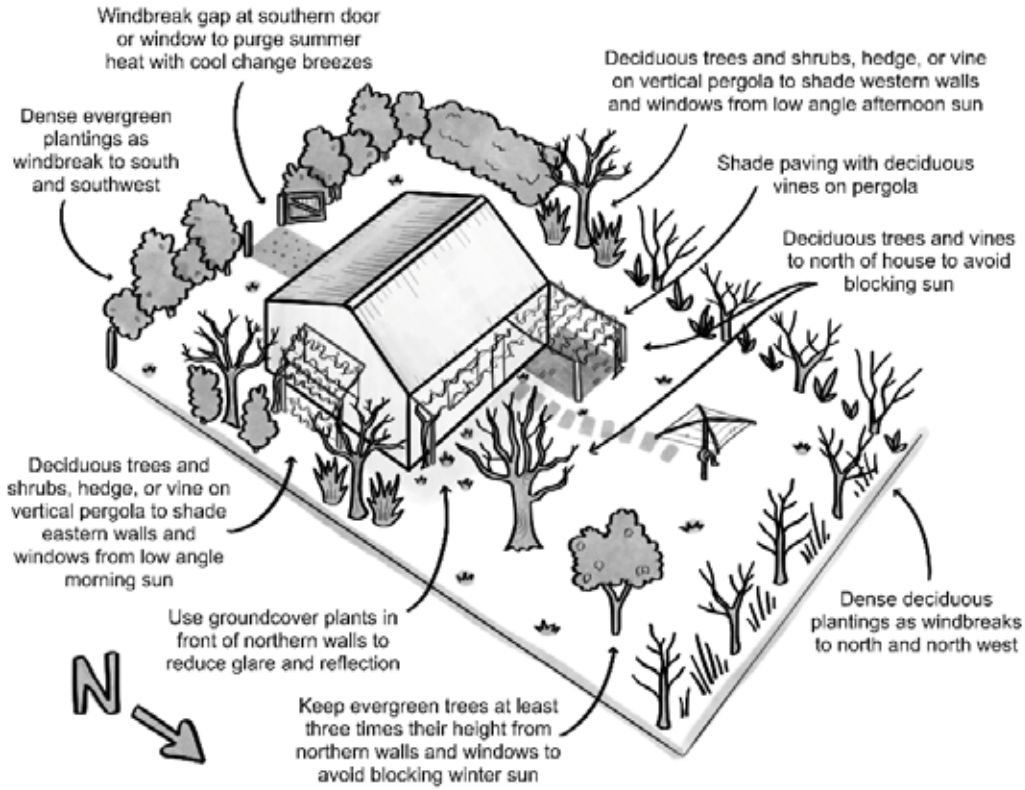
What is thermal mass and how does it increase heat in cities?

Thermal mass refers to the ability of a material to absorb, store and release heat. Materials with high thermal mass like bitumen, concrete, brick, masonry, paving and water absorb heat from the sun during the day and release it at night. In urban areas, large amounts of thermal mass create the 'urban heat island' effect where built-up areas are several degrees hotter compared to surrounding rural areas.



Summary of landscaping design to shelter your home

Select the ideas that are most relevant and practical for your context.




my
smart
garden
REUSE WATER
REUSE
WATER

South eastern Australia regularly endures drought and home gardens are a major contributor to high residential water consumption. Significant water savings can be made through careful design, improving the soil, efficient watering and lawn maintenance, and using alternative water sources such as rainwater, greywater or recycled water.

Water efficiency Tips

Check the Permanent Water Saving Rules and any additional water restrictions. Water before 10am in the morning or after 6pm in the evening to avoid evaporation losses in the warmest part of the day.

Melbourne Water
melbournewater.com.au

Select drought tolerant plants, preferencing indigenous plants wherever possible (see p22). Drought tolerant fruit trees and vines include olive, fig, grape, jujube, pomegranate, quince, goji, carob (requires male and female plants for production), loquat and mulberry.

Group plants with similar water requirements together and manage your lawn to improve its drought tolerance (see p50).

Water the soil, not the plants, because watering leaves wastes water and also increases the risk of fungal diseases. Consider installing drip irrigation, and lay this under your mulch. Avoid sprays or sprinklers, as these waste up to 70 per cent of water through drift and evaporation.

Check your hose and irrigation system regularly for leaks. Look out for any lush growth or damp spots in unexpected locations which may indicate leakage.

It is better to do a few deep waterings rather than many shallow, as this encourages roots to grow deeper into the soil where they are less vulnerable to drying out, and reduces evaporation losses.

Most common food plants prefer damp soil (like a wrung out kitchen sponge), so try to maintain this for best production. After you have watered, dig down to check that the water has reached the root zone.

Mulch your garden beds and pots to reduce evaporation losses (see p12).

Direct run-off from paved areas towards garden beds and use more permeable surfaces to allow water infiltration.

Water Tanks

Installing a water tank reduces your reliance on mains water, relieves demand on our water reservoirs and reduces the risk of local flash flooding. Renters may be able to use smaller, portable tanks.

Check the Tankulator for advice on water tank selection and sizing. The website can model your water use, catchment area and local rainfall, which will determine the best tank size for your needs. Estimate the water requirements of your food garden at about 5 L per square metre per day in the warmer months.

Note that you may save more water by plumbing your tank into toilets and the laundry, since water use in the garden tends to decline in cooler months but indoor use continues all year.

You are likely to require a pump for indoor plumbing, or to maintain sufficient pressure for hand watering or drip irrigation.

Clean gutters and leaf guards regularly. Installing first flush diverters on downpipes can improve water quality, but require regular maintenance. Tank inlets and outlets must be screened to prevent mosquito entry.

Tankulator
renew.org.au/tankulator

Greywater

Greywater is waste water from your laundry, bath or shower that can be reused for garden watering.

It is an important resource that can provide resilience as our climate becomes hotter and rainfall decreases, but greywater can contain harmful pathogens such as bacteria and viruses so it is very important to follow safety advice (see p48) to avoid health and environmental risks.

Greywater will also contain salts, residues and chemicals from personal care and cleaning products, so be sure to choose simple, non-toxic and greywater safe products, minimise the quantities used, and observe the response from your plants.

Greywater is ideal for use on fruit trees due to the physical separation between greywater application and crop, and their higher water and phosphorous demands relative to indigenous plants. Greywater should not be used on vegetable gardens or where it may come into contact with the edible part of a food plant.

Small fibres from synthetic fabrics (e.g. nylon, polyester, acrylic) break off during the laundry cycle and are a major source of microplastics. Wearing more natural fibres (e.g. cotton, wool, linen), or using a specially designed laundry filter or bag will avoid microplastic pollution from your greywater.

Always apply greywater to healthy, mulched soil and follow all safety precautions.

Recycled water

Recycled water is waste water that has been collected and treated by your water provider so it can be reused for a variety of non-drinking purposes.

Using recycled water reduces mains water use and may save you money. Recycled water usage is exempt from Permanent Water Saving Rules.

Ask your water authority if your property can connect to recycled water and whether it is suitable for garden irrigation.

Greywater Safety

DO

- ✓ Use greywater from the washing machine, bath and shower only
- ✓ Choose greywater safe liquid laundry products and use the minimum effective quantity per wash. Liquid products have significantly less salt than powders. Avoid fabric softeners and unnecessary additives like strong fragrances
- ✓ Choose low phosphate laundry products when using greywater on native plants
- ✓ Use greywater to irrigate fruit trees
- ✓ Wash your hands carefully after emptying buckets or maintaining your greywater system
- ✓ Wear more natural fibres or use a microplastics laundry filter or bag
- ✓ Always apply greywater to healthy, mulched soil

DON'T

- ✗ Do not use kitchen waste water (including from dishwashers) due to the high concentration of food waste, fats and chemicals
- ✗ Do not use water from washing cloth nappies
- ✗ Do not store greywater for more than 24 hours
- ✗ Do not use greywater on vegetable or herb gardens, or anywhere greywater may have contact with the edible crop
- ✗ Never let children or pets drink or play with greywater
- ✗ Never allow greywater to run off your property or enter stormwater systems. Do not apply more than the soil can absorb

STOP

- ✗ Stop using greywater during periods of wet weather
- ✗ Stop using greywater if the soil starts to smell or plants fail to thrive

Downpipe diversion

Downpipe diversion allows rainwater to infiltrate back into the ground rather than flowing into stormwater.

The increase in hard surfaces in our city is increasing stormwater volumes, decreasing soil moisture and contributing to a hotter urban microclimate. By allowing rainwater to soak into the ground, we can reduce mains water use, stay cooler in summer, reduce the risk of local flash flooding and enjoy cleaner, healthier waterways.

A downpipe diverter can be fitted to an existing downpipe or water tank overflow, and discharges rainwater to garden areas. The diverter valve can be switched to stormwater during wetter months if required.

Avoid downpipe diversion where the ground slopes towards a building, where the area around the downpipe is impervious, or where the soil does not infiltrate water easily.

Observe recommended discharge distances to avoid damaging buildings, which range from 1 m in sandy soils to 5 m for reactive clay soils that are prone to shrinking and swelling with changing moisture levels.

Please note that a licensed plumber must be used for stormwater connections and modifications.

Lawns

Good management creates a healthy, drought tolerant lawn without chemicals. Consider replacing unused areas with indigenous grasses and groundcovers, food or habitat gardens.

Lawns are important spaces for recreation, and have some useful functions like feeding grounds for birds, filtering stormwater, and cooling our home environment in summer. On the other hand, too much lawn can waste water (as well as your time and money!), and lawn chemicals negatively impact the environment.

Choosing Lawn Species

Choose a grass species that suits your climate and sun conditions, and the amount of foot traffic it will receive.

Rhizomatous grasses that spread through underground stems (e.g. couch, kikuyu, buffalo) are appropriate for lawns in heavy summer use, but are also invasive weeds in local ecosystems and compete heavily with food plants. Use these where necessary but prevent spread by mowing the grass before it produces seed and trimming edges to preventing escape.

Native Lawns

In areas without heavy foot traffic, consider indigenous grasses or groundcovers that have lower water needs and produce seeds for wildlife. Cool season native grasses are more tolerant of frost, shade or larger plants nearby (e.g. Weeping Grass, Microlaena stipoides), while warm season grasses (e.g. Kangaroo Grass, Themeda triandra) need more sunlight and tolerate hotter temperatures and exposed areas. A mixture of both types will give some active growth all year, but note that none of our native grasses are green in summer.

Lawn care and maintenance

Healthy soil means a lusher lawn with lower maintenance. Start improving your soil by checking the pH (lawn grasses prefer pH 6-7), aerating and adding organic matter (see p11).

Cut your lawn at the highest recommended height for the grass variety (usually about 5 to 7cm), especially in summer. Cutting too low restricts photosynthesis so your lawn cannot feed itself as effectively, which weakens the grass and increases the risk of pests and diseases. Taller lawns shade the soil, keep roots cool and reduce moisture loss. This 'living mulch' enables deeper roots for better drought tolerance, and limits weed seed germination.

Sharpen your lawnmower blades for cleaner cuts and cut when the grass is dry to reduce the risk of disease. Mow your lawn frequently so you don't cut more than a third of the height off the grass blades. Removing more can stress the grass which becomes more prone to pests and diseases.

Grass clippings are a rich source of nitrogen and organic matter, so remove the catcher from your lawnmower and they will decompose back into the lawn as free fertiliser. (You may need to remove the clippings if mowing an overgrown lawn, as they will block too much sun.)

Check your lawn for thatch (dead grass next to the soil surface) in spring. If a thick layer has built up, rake firmly to remove and apply a sprinkle of compost. As your soil health improves, microorganisms and earthworms will remove more thatch for you.

Minimise or avoid chemical fertilisers, herbicides and pesticides. A few weeds in your lawn are no big deal, and occasional pests are part of nature's balance (see p32). If some lawn areas fail to thrive, replace them with better suited plants.

Removing lawn

Clumping grasses can be removed by sheet mulching over the lawn. Running or rhizomatous grasses that spread through deep underground horizontal stems (e.g. couch, kikuyu and buffalo) are harder to eliminate by sheet mulch alone because they regrow easily from energy stored in their roots. To remove these grasses without herbicide you can either:

- Solarise the lawn by covering with a tarp or plastic sheet for several months from early spring through to summer, so the grass is destroyed through heat and/or lack of light. (Be sure to secure it with heavy weights), or
- Loosen the soil with a garden fork, then carefully dig out as much of the root system as possible. This is a faster but higher labour option that is best carried out with lots of helpers, music and food!

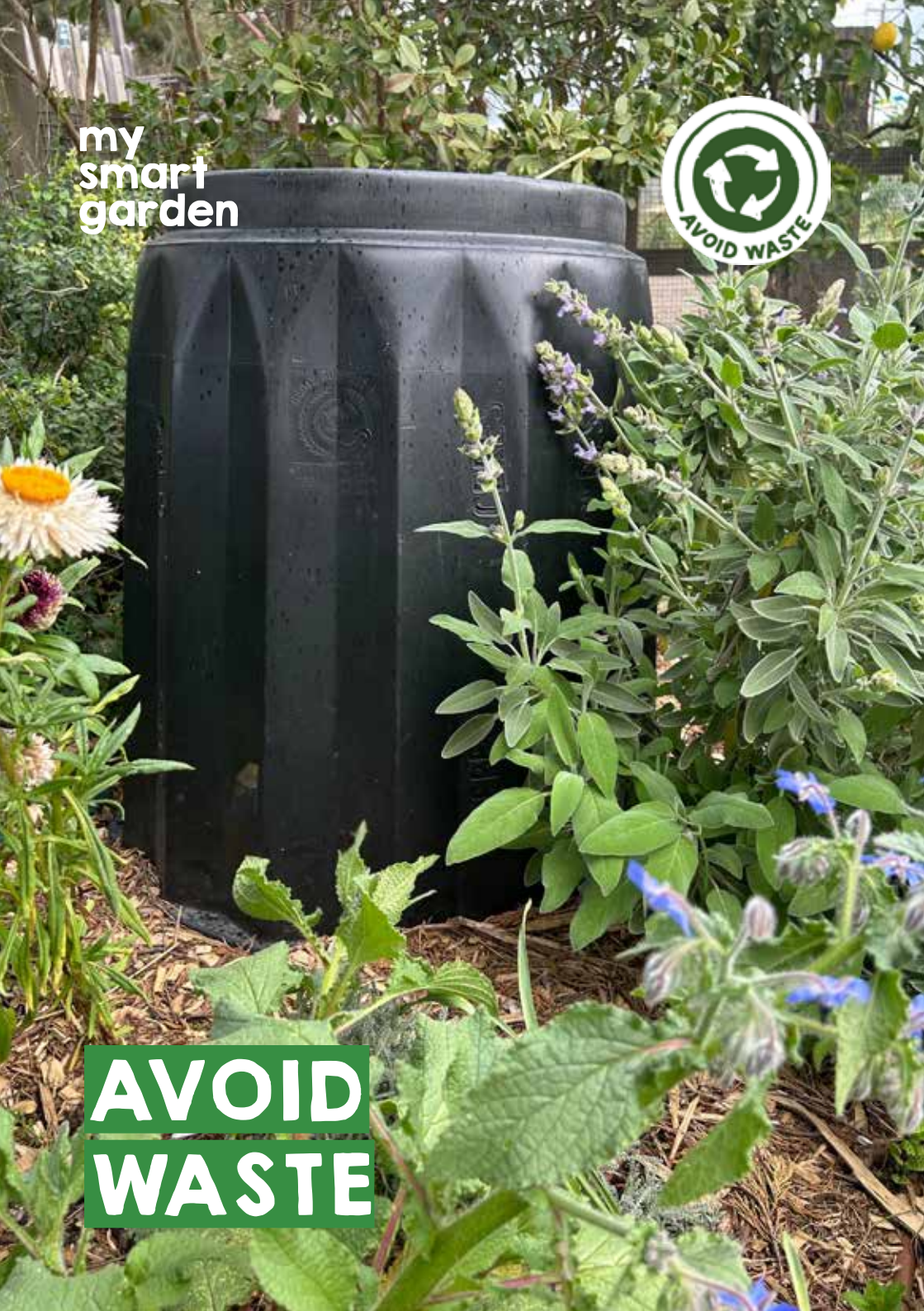
Ideally sheet mulch after both of these methods and be sure to patrol and remove any remaining grass that reshoots.

Sheet mulching

Sheet mulching converts lawn to garden beds by stimulating the grass to grow with a burst of water and nutrients, then depriving it of light for photosynthesis.

Start by soaking large pieces of newspaper and/or cardboard (avoid glues, gloss, materials with coatings or heavy inks) in a wheelbarrow of water. Mow the lawn very low, then water and fertilise it to encourage growth. Lay heavily overlapped (by about 15 cm) layers of wet newspaper (minimum 10 sheets thick) or cardboard across the lawn. Spread 10 to 15 cm of mulch on top. You can sheet mulch around existing plants, or punch small planting holes into the soil for seedlings if you want to plant immediately. Aim to have a 'living mulch' of plants by the time the sheet mulch has broken down in approximately one year.

my
smart
garden



AVOID WASTE

Choosing sustainable garden products

We can avoid a lot of waste in the garden by choosing products wisely and reusing what we already have.

We don't often think about where our garden products come from, but they all have a story. For example, red gum timber is used to produce bark chips, tomato stakes and railway sleepers, but River Red Gum trees grow in a delicate ecosystem and harvesting this product is unsustainable.

We can use our purchasing power to minimise negative impacts and support more sustainable practices. Buying recycled products wherever possible is important to 'close the loop' and ensure the viability of recycling industries.

Product selection tips

Avoid purchasing unnecessary garden products and reuse what you already have, or buy secondhand. Gardens are the perfect canvas to creatively upcycle unwanted household items into pots, trellises and sculptures. Just be wary of painted, coated, varnished or treated products, and plastics that are not UV stable, as these eventually break down and contaminate soil with chemicals, heavy metals and microplastics.

Grow your own stakes and mulch! Bamboo is a wonderful resource that can be used for trellising. Be sure to choose clumping types and prevent spread to unwanted areas. Use the 'chop and drop' method to turn prunings into mulch (see p12).

Invest in a small number of high quality tools, and learn how to sharpen and maintain them.

Virgin concrete, metal and plastics are very energy intensive to produce and have a high carbon footprint, so minimising use of these wherever possible is important in sustainable gardens.

Buy Australian products and look for Forest Stewardship Council (FSC) certified timbers. While some outdoor furniture companies claim teak is plantation-harvested in Asia, this magnificent rainforest tree cannot be grown in plantations. Make sure to ask where mulch has come from as some are sourced from the logging of old growth forests.

Grass trees, tree ferns and native orchids may have been sourced illegally from parks, forests and reserves. Ensure plants that you are purchasing have been grown in a nursery.

River pebbles have been sourced from waterways, which destroys the local ecosystem and causes silt to wash downstream to communities who rely on the river for drinking and washing. Use locally sourced crushed rock and gravel instead.

Poor quality garden products will eventually end up in landfill. Try to purchase durable items that you can repair, reuse or recycle (or biodegradable items that will rot!) at the end of their useful life.

Choosing your compost system

Composting your food scraps, grass clippings, prunings, leaves and other garden waste onsite will provide you with a free and sustainable source of high quality compost, fertiliser and mulch. It also avoids the greenhouse gas emissions associated with transport, processing and packaging of municipal recycling services and commercial products. There are many ways to compost onsite, including compost bins, worm farms and bokashi buckets. They are all different so it is important to select the system that best suits your context.

	WORM FARM	BOKASHI	COMPOST BIN	FOOD & GARDEN BIN
Vegetable and fruit scraps *(excluding onion, garlic or citrus, no fruit stickers)*	✓	✓	✓	✓
Coffee grounds	✓	✓	✓	✓
Tea leaves (no tea bags unless labelled home compostable)	✓	✓	✓	✓
Citrus	✗	✓	✓	✓
Onion and garlic	✗	✓	✓	✓
Egg shells	✓	✓	✓	✓
Meat, fish and tofu, cooked and raw	✗	✓	✗	✓
Bread, pasta, rice and noodles	✗	✓	✓	✓
Dairy *(no liquids)*	✗	✓	✗	✓
Grass clippings *(in layers max 3 cm thick)*	✓	✓	✓	✓
Weeds that cannot reshoot or grow from seed	✓	✓	✓	✓
Grasses and weeds with seeds, bulbs or runners that could regrow	✗	✗	✗	✓

	WORM FARM	BOKASHI	COMPOST BIN	FOOD & GARDEN BIN
Small twigs and prunings *(chopped up)*	✓	✗	✓	✓
Branches and small logs *(check max size with your council)*	✗	✗	✗	✓
Herbivore *(e.g. sheep, horse, cow, guinea pig, rabbit), and poultry manures (e.g. chicken, duck, pigeon, quail, in layers max 3 cm thick)*	✓	✗	✓	✗
Animal fur/hair, human hair *(not coloured)*	✓	✓	✓	✗
Old fabric made from natural fibres *(e.g. 100% cotton, linen or wool)*	✓	✗	✓	✗
Straw, autumn leaves *(no eucalyptus)*	✓	✗	✓	✓
Eucalyptus leaves	✗	✗	✗	✓
Shredded newspaper, paper, cardboard and egg cartons *(no glues, glossy or heavy inks or waterproof coatings)*	✓	✗	✓	✗
Wood shavings, sawdust and small amounts of wood ash *(no treated, painted or varnished wood)*	✓	✗	✓	✗
Packaging labelled 'home compostable'	✓	✓	✓	✗

Keep out of ALL compost systems:

- Cat and dog poo. Bury deeply or use a pet poo composter
- Vacuum cleaner dust
- Treated, painted, varnished or dyed wood or wood products
- Large woody prunings and logs. Use hard rubbish collection, or reuse as garden edging or logs in habitat garden
- Paper or cardboard with glues, glossy or heavy inks or waterproof coatings

Compost bins

Compost bins are a great solution if you have enough outdoor space, and a garden or pot plants that can use the compost. It's a flexible and resilient system that can handle large volumes of food and garden waste, and you can stop and start if you go away.

There are many types of compost bin, but they all function in the same way. Consider the size, price and aesthetic you prefer. Bucket composting is a portable, small space system that is ideal for renters and apartments (see p59).

Compost bins do not require sun to function, however the extra warmth can speed up decomposition in winter. They are best located on soil, next to a heavy-feeding tree (e.g. citrus) to absorb any nutrient-rich leachate. They can be positioned on concrete or paving if necessary but they may stain these surfaces without a barrier.

To balance additions of nitrogen materials like food scraps and grass clippings, you will need a regular supply of carbon materials such as shredded cardboard (no glues, glossy or heavy inks or waterproof coatings), autumn leaves (no eucalyptus), straw, wood shavings or sawdust. Make sure wood products contain no paint, varnish or other chemical treatment.

Place a supply of carbon materials next to the bin, and always cover your nitrogen materials with a layer of these to prevent flies and smell.

Use a roughly equal volume of nitrogen and carbon materials and keep your layers less than 10 cm thick for most materials. In other words, for every bucket of food scraps you add, always add a bucket of carbon materials on top. Use thin layers up to 3 cm thick for extremely rich materials like poultry manure (nitrogen) or wood shavings and sawdust (carbon).

Compost needs a balance of air and water. Add water if necessary to maintain damp but not water logged conditions. Every few weeks, fluff up your compost with a garden fork or compost screw, or turn the pile to ensure it stays aerated. For bucket composters, simply roll or shake the bucket.

If rodents are an issue, select off ground tumbler compost bins or bucket compost, or retrofit open-based bins with 1 cm weldmesh. Meat scraps or bones tend to attract rodents and are best avoided.

Ants may indicate that the compost is too dry, and see p62 for advice if there are many small flies. Otherwise, don't worry about beetles, slaters and many other creatures in your compost bin. In addition to microorganisms, these creatures are part of the 'soil food web' that decomposes organic matter.

Your compost is ready when it looks dark and crumbly, and smells pleasantly earthy. It's normal for home compost bins to take three to six months to create mature compost. If yours is taking longer, check the levels of moisture and air, and the balance of carbon and nitrogen materials. If your pile also smells, see p62. If your pile does not smell but is not breaking down, it may require more nitrogen materials and/or moisture. Smaller sizes of materials and turning the heap will speed up decomposition. Some materials like eggshells, avocado pips and twigs take a very long time to decompose and may be visible in the otherwise mature compost, but will not harm your soil.

Bucket composting

Composting in buckets is an ideal system for renters, apartments, balcony gardens and other small spaces. It is easy and inexpensive to set up, scalable by adding more buckets, stackable to save space, and easy to move if required.

Ten or 20 L food grade plastic buckets can often be sourced at no charge from restaurants and cafes. To convert a bucket, drill about thirty 3 mm holes in the top lid, about five 10 mm holes in the bottom of the bucket plus five more around the sides close to the base. Position in shade as the buckets are not UV stabilised. You may need to add a moisture barrier on paved surfaces to avoid staining.

Bucket composting is simply a mini version of regular systems, so follow general advice on p58. When your bucket is full, start adding materials to a new one and continue adding buckets until the compost in your first is mature and ready to harvest.

Worm Farm

Worm farms are a good system for enthusiastic households, especially those with children who enjoy looking after thousands of wriggly pets!

There are many types of worm farm including commercial systems with multiple trays, or wheelie bin types that are emptied from the bottom. You can create a worm farm in an old bathtub or other suitable container. The more surface area, the larger the amount of food scraps a worm farm can process.

Worms are very sensitive to extreme heat, which can be difficult for households that are away during summer holidays. Worms prefer their bedding materials to stay between 18 and 24°C. Smaller and darker coloured worm farms are more vulnerable to heat. In summer your worm farm must be in a cool, shaded position, but a warmer spot in the winter will help them stay active and keep processing your food scraps. Under a deciduous tree is an ideal spot all year round!

Begin by feeding very small amounts of food scraps, and watch how long they take to be processed. Worms can only eat their body weight in a week, and it takes several months for their population to build up when starting a worm farm.

Be careful not to overfeed as uneaten food can become smelly and make conditions unsuitable for worms. Once established, do not add more than a 3 cm layer of food over half the surface area of your worm farm, and wait until it is mostly gone before adding more. Many households will need more than one worm farm to process their food scraps.

Worms like vegetable and fruit scraps, coffee grounds and tea leaves. They also need some carbon materials like autumn leaves or cardboard. Maintain a thin layer of carbon materials on the surface to keep conditions dark and moist, and inhibit vinegar flies and smells.

Worms like their bedding to be very moist (but not waterlogged) with good aeration. As the food scraps break down, you may need to gently fluff up your worm farm if it becomes compacted. Make sure you regularly drain the worm farm, or keep the tap open. If your farm is too wet, try adding torn up cardboard to absorb excess moisture. Keep the lid on to exclude rain, light, rodents and birds.

Worms don't need to be fed every day and temporary period with limited food is not a concern, but if you go away for several weeks you may needa plan to care for your worms.

Ants may indicate that the worm farm is too dry, and see p62 for advice if there are many small flies. Otherwise, don't worry about beetles, slaters and other creatures in your worm farm. In addition to microorganisms, these creatures are all part of the 'soil food web' that decomposes organic matter.

When the worm castings (also known as vermicast or worm poo) build up, you can harvest them for garden use. In worm farms with trays, start feeding in a new layer so the worms move up and you can remove the tray below. In other systems you can feed on one side for a while and harvest from the other.

For a more effective separation of worms and castings, tip the entire contents onto a tarpaulin in the sun, and gradually scrape the castings away from the surface as the worms move away from the light.

Worm castings are very similar to regular compost. See p11 for tips on how to use compost in your garden. The liquid from your worm farm can also be used to water your plants.

Troubleshooting

Smelly compost bin or worm farm?

Well-managed compost systems should smell pleasantly earthy. If your compost bin or worm farm is starting to stink, use this process to resolve the problem:

1. Fluff up your worm farm or compost bin with a compost screw or garden fork. This incorporates air, which is important for decomposition and preventing smells.
2. Check moisture levels and ensure good drainage. Your system should be damp but not waterlogged. Squeeze a handful of the compost materials or worm bedding and you should get no more than a few drops of water coming out. If there's more then it might be too wet. Mixing in dry carbon materials will absorb excess moisture, if needed.
3. Check the balance of nitrogen and carbon materials, and that correct materials have been used (see advice for material choice on p56, compost on p58, and worm farms on p60). If your worm farm has been overfed, remove excess food and bury or place in your food and garden bin.
4. Cover the surface completely with a generous layer of carbon materials to contain the smell, and stop adding materials until balance is restored.

Most systems will recover a few weeks after following this process.

Many small flies when you open the lid?

While not harmful to your compost system, these small 'vinegar flies' are certainly annoying! They indicate an unbalanced and/or uncovered system. Check your balance (see left) and make sure you are always covering nitrogen materials like food scraps with carbon materials like cardboard or autumn leaves. Covering the compost bin or worm farm surface completely with a thick layer of these should correct the issue.

In the meantime, you can also make vinegar fly traps with 1/4 cup apple cider vinegar, 1/4 cup water and three drops of dishwashing liquid. Place small containers of this mix in and around the system to reduce their numbers more quickly.

Bokashi Composting

Bokashi composting is ideal for apartments or households without their own garden area, or where emptying a scrap bucket every day would be inconvenient. It also works well in the office kitchen!

Bokashi is not a complete system on its own, so you will need somewhere to compost or bury the waste when the bucket is full. Many people take their bokashi to a neighbour or community garden for composting. Most households need to empty their bucket every three to four weeks.

Bokashi can accept a wider range of foods than worm farms and compost (see p56).

Bokashi composting uses a grain or liquid spray containing microorganisms to 'pickle' food waste, so it can begin to break down in the bucket without smelling unpleasant.

Keep a small container on the kitchen bench to collect food scraps. At the end of the day, add these to the bokashi bucket and compress (with a potato masher or similar tool). Finish with a sprinkle/spray of bokashi and replace the lid. You only need a very small amount to inoculate the waste.

Drain the liquid in your bokashi bucket at least once week to prevent smells. This can be diluted and used as a liquid fertiliser, or tip it down the sink if you prefer.

my smart garden

INDIGENOUS PLANT GUIDE: HOBSONS BAY CITY COUNCIL

Hobsons Bay is part of the Victorian Volcanic Plains bioregion. The following species are ideal for gardens in Hobsons Bay as they are indigenous, adapted to the local climate and soil conditions, and provide important habitat for local wildlife.

KEY

- **Full sun**
- **Part shade**
- **Full shade**
- **Suitable as hedge**
- **Drought tolerant**
- **Needs seasonal water**
- **Height**
- **Width**

GRASSES AND TUSSOCKS

	Name	Features	Requirements
 	**Common Sedge** *(Carex tereticaulis)*	Attractive flower-heads August until April.	1-1.5m · 1m Moist soils, tolerating occasional inundation.
 	**Silky Blue-grass** *(Dichanthium sericeum)*	Look great on mass. Excellent coloniser for bare ground or rockeries. If conditions are right can easily spread throughout the garden.	80cm · 10-40cm Well-drained, dry soil.
 	**Kangaroo Grass** *(Themeda triandra)*	Attractive tufting grass with distinctive flower spikes in summer. Grows mostly in warm seasons. Attracts butterflies.	40cm-1m · 50cm Prefers well-drained soils but adapts to most.
 	**Pale Flax-lily** *(Dianella longifolia)*	Hardy, easily maintained plant. Good for borders along pathways and fencelines. Great for native bees and butterflies.	1m · 50cm Well-drained soil.
 	**Wallaby-grass** *(Rytidosperma spp.)*	Small tussock grass with attractive foliage. Prune in autumn to remove dead foliage and encourage new green growth in winter. Attracts butterflies.	20-40cm · 40cm Prefers poorly drained soils.
	**Tussock-grass** *(Poa sp.)*	Densely tufting grass. Good for blue tongues and other lizards to hide amongst. Attracts butterflies.	40cm-1m · 40cm -1m Select species to suit soil conditions.

SMALL PLANTS

	Name	Features	Requirements
 	**Common Everlasting** *(Chrysocephalum apiculatum)*	An excellent rockery plant with contrasting silver foliage. Prune regularly to encourage new growth. Great for native bees and butterflies.	10-30cm; 0.5-1m Well-drained soil.
 	**Kidney Plant** *(Dichondra repens)*	An excellent lawn substitute in moist, shady areas where traffic is very light. Fills gaps in rockeries and garden edges.	prostrate; spreading Well-drained soil.
 	**Running Postman** *(Kennedia prostrata)*	Attractive as a ground cover, in tubs, hanging baskets, cascading over rocks, walls and under trees. Great for native bees, butterflies and birds.	prostrate; 1.5m Adapts to most soils, but prefers dry and well-drained.
 	**Basalt Daisy** *(Brachyscome basaltica)*	Looks great in ornamental beds and rockeries. Will grow in pots. Light pruning after flowering to encourage new growth. Great for native bees and butterflies.	50cm; 1m Prefers moist soil.
 	**Sticky Everlasting** *(Xerochrysum viscosum)*	Prune hard in autumn to extend life. Spectacular planted in drifts. Great for native bees and butterflies.	60cm; 30cm Well-drained soil.
 	**Tufted Bluebell** *(Wahlenbergia sp.)*	Looks great in containers or when planted amongst grasses. Great for native bees and butterflies.	30cm; 15cm Well-drained, moist soil.

SMALL PLANTS

	Name	Features	Requirements
 	**Native Flax** *(Linum marginale)*	Grows mostly in the cooler months and dies back after flowering. Great for native bees and butterflies.	50cm, 30cm Well-drained moist soil.
 	**Austral Stork's Bill** *(Pelargonium australe)*	Great in rockeries. Aromatic leaves.	50cm, 30-60cm Prefers well-drained soil.
 	**Bulbine Lily** *(Bulbine bulbosa)*	Beautiful in mass plantings. Dies back to tuberous rootstock in dry weather to re-shoot in autumn.	40cm, 30cm Prefers well-drained soil.
 	**Chamomile Sunray** *(Rhodanthe anthemoides)*	Grow well in containers, rockeries or a mass feature in a garden. Great for native bees and butterflies.	30cm, 30-60cm Prefers well-drained moist soil and sheltered position.
 	**Showy Podolepis** *(Podolepis jaceoides)*	Highly ornamental. Beautiful planted in drifts.	30-60cm, 30cm Prefers moist, well-drained soil.
	**Drumsticks** *(Pycnosorus globosus)*	Ideal for mass plantings. Great for native bees and butterflies.	20-50cm, 50-90cm Prefers moist, heavy soil and tolerates inundation.

SHRUBS

	Name	Features	Requirements
	**Spreading Eutaxia** *(Eutaxia microphylla var. diffusa)*	Prune to create a bushier plant. Commonly referred to as 'Egg and Bacon' plant due to colour of flowers.	40cm-1m ↔ 1-1.5m Well-drained soil. Very drought tolerant.
	**Rock Correa** *(Correa glabra)*	Establishes well under existing trees. Responds well to a light pruning. Good for honeyeaters and will attract the Eastern spinebill when it visits Hobsons Bay.	1-2m ↔ 2-3m Well-drained, dry soil.
	**Sticky Daisy-bush** *(Olearia glutinosa)*	Dense rounded shrub ideal for coastal garden. Attracts butterflies.	2m ↔ 1.5m Well-drained sandy soil. Salt tolerant.
	**Wedge-leaf Hop-bush** *(Dodonaea viscosa spp. cuneata)*	Very hardy shrub. Excellent screening plant. Responds well to pruning.	2m ↔ 1m Well-drained soil. Excellent for dry sites.
	**Austral Indigo** *(Indigofera australis)*	Fast growing, highly ornamental shrub with lightly perfumed flowers. Grows well under trees. Attracts native bees and butterflies.	1.5m ↔ 2m Prefers well-drained soil in sheltered position.
	**Hop Goodenia** *(Goodenia ovata)*	Fast growing. Responds well to pruning. Grows well under trees. Attracts birds and butterflies.	1.5m ↔ 1m Prefers moist, well-drained soil in sheltered location, but tolerates a range of soils.

SHRUBS

	Name	Features	Requirements
	**Gold Dust Wattle** *(Acacia acinacea)*	A good low screening plant. Suitable for large pots. Like most wattles, is fast growing. Grows well under trees. Attracts birds.	1.5m, 2m Adaptable to most soils but prefers well-drained.
	**Desert Cassia** *(Senna artemisioides)*	Slow growing but spectacular when in flower, with attractive seed pods. Grows well under trees. Attracts butterflies.	2m, 1.5m Prefers dry, well-drained soil.
	**River Bottlebrush** *(Callistemon sieberi)*	Excellent screening shrub. Pruning encourages flowering. Good habitat for small birds.	2-5m, 2-3m Adapts to most soils.
	**Sweet Bursaria** *(Bursaria spinosa)*	Mass flowering plant. Excellent for screening and windbreaks. Develops small spines on the branches. Important plant for insects and butterflies and attracts birds.	4-6m, 2-3m Well-drained soil. Excellent for dry sites.
	**Fragrant Saltbush** *(Rhagodia parabolica)*	Fast growing hardy plant that can survive harsh conditions. Clusters of red berries in late spring and summer. Attracts butterflies.	1-2m, 2m Prefers dry, well-drained soil but adapts to most soils. Drought tolerant.
	**Shiny Cassinia** *(Cassinia longifolia)*	Fast growing, rounded, pleasantly aromatic shrub. Prune hard after flowering.	1.5-2m, 1.5-2m Well-drained soil.

TREES

	Name	Features	Requirements
 	**Silver Banksia** *(Banksia marginata)*	Bushy forms make excellent screening plants. Attracts insects and birds.	4-8m ⟷ 1-5m Well-drained, moist soil.
 	**Grey Box** *(Eucalyptus microcarpa)*	Attractive white/cream flowers from Feb to August. Attracts birds.	10-25m ⟷ 10-15m Adapts to most soils.
 	**Drooping Sheoak** *(Allocasuarina verticillata)*	Fast growing, graceful tree and useful windbreak. Needles will suppress weeds and other plants from growing nearby	6-8m ⟷ 3-6m Well-drained soil. Drought tolerant.
 	**Blackwood** *(Acacia melanoxlyn)*	A long-lasting tree providing good screening and shade. Growth stunted in drier conditions. Attracts butterflies and birds.	5-15m ⟷ 3-10m Prefers deep, moist soil, and tolerates inundation or dry soil once established.
	**Lightwood** *(Acacia implexa)*	Similar to Blackwood although can tolerate drier, rockier conditions. Good screening tree. Attracts birds.	6-8m ⟷ 3-6m Well-drained soil. Excellent for dry sites.
	**Golden Wattle** *(Acacia pycnantha)*	Australia's floral emblem. Like all Wattles, can grow in close proximity to Eucalypt trees	8m ⟷ 4m

COASTAL

	Name	Features	Requirements
 	**Chaffey Saw-sedge** *(Gahnia filum)*	Tussocky sedge suitable for wet depressions.	↕ 1m ↔ 1m Moist sandy soil. Salt tolerant.
 	**Spear-grass** *(Austrostipa stipoides)*	Beautiful large, open flowerheads in summer.	↕ 20cm ↔ 30cm Well-drained soil.
	**Common Sea Heath** *(Frankenia pauciflora)*	Container, rockery plant. Light pruning recommended. Great for native bees and butterflies.	↕ 15cm ↔ 1m Well drained soil. Salt tolerant.
 	**Coastal Banksia** *(Banksia integrifolia)*	Attractive dark green leaves with sliver underside. An excellent ornamental windbreak.	↕ 10m ↔ 5m Well-drained soil, responding to summer watering.
 Photo Russell Best  Photo Russell Best	**Rounded Noon-flower** *(Disphyma crassifolium)*	Great on embankments. Great for native bees and butterflies.	↕ prostrate ↔ 2m Reliable in most soils. Salt tolerant.
	**Coast Flax-lily** *(Dianella brevicaulis)*	Hardy, easily maintained. Great for fence lines and borders.	↕ 1m ↔ 50cm Well drained soil.

CLIMBERS

	Name	Features	Requirements
 	**Purple Coral Pea** *(Hardenbergla violacea)*	Climbing plant useful as a screening plant. Grows well in pots. Great for native bees and butterflies.	3m Well-drained soil.
 	**Small-leaved Clematis** *(Clematis microphylla)*	Attractive cream flowers Sept to Jan. Climbing plant useful as a screening plant or ground cover. Grows well in pots. Great for native bees and butterflies.	2-4m Well drained soil.

Specialist native nurseries

These nurseries supply indigenous plants for this bioregion with plants grown from locally gathered seeds to preserve the genetic biodiversity of our local area.

- Newport Native Nursery, Newport

newportnativenursery.com.au

- Bili Nursery - Westgate Biodiversity

westgatebiodiversity.org.au

Indigenous plant use

The plants contained in this guide form an important part of the cultural heritage of Aboriginal and Torres Strait Islander people, who have developed many cultural, medicinal and practical uses for these species. More information including labels for your habitat garden can be found in the Indigenous Plant Use booklet by Zena Cumpston.

nespurban.edu.au/booklets/

REPLACE WEEDY PLANTS

Do you have any of these weedy plants in your garden? Please replace them with the suggested indigenous plants that have a similar look.

Climbers & Creepers

Gazania sp.

Low growing invasive daisy with brightly coloured flowers of various colours

Replace with Showy Podolepis *(Podolepis jaceoides)*

Morning Glory *(Ipomoea Indica)*

Fast growing climber.
Leaves spear shaped, bright green.

Replace with Large bindweed *(Calystegia sepium)*

Grasses & Herbs

Agapanthus *(Agapanthus spp)*

Leaves poisonous.
Sticky sap can ulcer mouth.

Replace with Pale flax-lily *(Dianella longifolia)*

Mirror Bush *(Coprosma repens)*

Highly glossy leaves with lots of small fruits/seeds

Replace with Wedge-leaf Hop-bush *(Dodonea viscosa)*

Scan for more info on My Smart Garden and sustainable gardening events and resources

my smart garden

HOBSONS BAY CITY COUNCIL