



**CITY OF
PERTH**
City of Light

Micro Greening in the City

Urban planting guide



2024

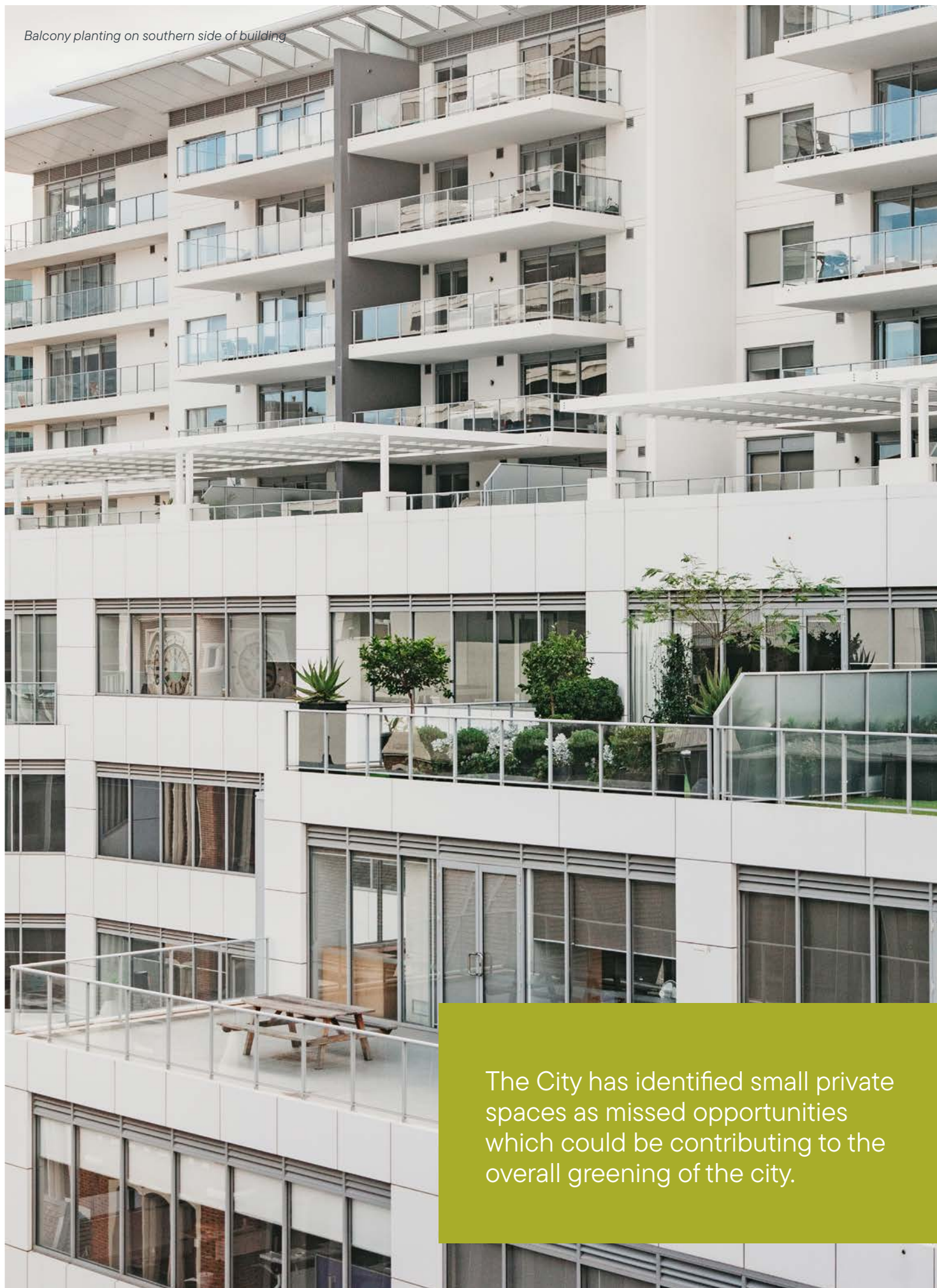
Potted plants on re-purposed ladder in entrance lobby to city cafe



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The City has identified small private spaces as missed opportunities which could be contributing to the overall greening of the city.		There is a huge variety of pots and planters available from expensive architectural pots to simple plastic tubs. The selection you make depends on your budget, the size of your urban environment and the style you wish to achieve.	
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The city is full of left over spaces which perform primary, utilitarian functions including vehicular access routes, bin storage areas or pedestrian alleyways. Yet the majority of these spaces are harsh and unattractive with amazing potential to be transformed through the incorporation of simple urban greenery.		Based on the information to date you now understand the type of area you are planting as well as the specific environmental considerations. Next comes the best part, choosing the plants.	
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Balcony planting on southern side of building



The City has identified small private spaces as missed opportunities which could be contributing to the overall greening of the city.

Background

The City of Perth (The City) is working on a range of city greening initiatives while delivering on community expectations and actions within the Strategic Community Plan.

The specific greening initiatives implemented emerge from various strategies, plans, guide and studies, including:

- City of Perth Urban Greening Strategy 2023-2036
- City of Perth Urban Forest Plan 2016-2036
- City of Perth Street Tree Guide 2023
- Green Infrastructure and Biodiversity Study (2017)
- Water Sensitive Transition Study (2017)

The Urban Greening Strategy sets out the City's commitment for Perth to be a greener, cooler and more resilient place that is welcoming and vibrant.

The Strategy provides the framework for the development of a suite of supporting plans and technical and design guidelines to help increase the level of urban greening in our city's streets, open spaces and buildings and deliver this commitment.

Introduction

The Micro Greening in the City Guide is part of the Urban Greening Strategy's document suite.

It invites our community to join us on our greening journey by providing succinct, informative, inspirational and engaging information that may encourage and assist residents, retailers, commercial tenants and building owners with planting in small scale, privately owned areas such as balconies, shop fronts and interior spaces.

What is micro greening?

Micro Greening is the 'greening' or vegetation incorporated at the micro-scale. Small interventions like simple pot plants or vines growing up a wall are examples of Micro Greening.

Why is this important?

Even at this small scale, Micro Greening can have a profound effect on a city's livability by:

- reducing air pollution
- reducing the urban heat island effect
- increasing biodiversity
- improving health and wellbeing for residents and city workers
- creating a sense of place
- providing a welcoming environment for visitors
- creating an attractive green city

Types of Micro Greening

Four main types of Micro Greening will be explored in further detail through the following case studies;

- Balconies
- Interior spaces
- Shop fronts
- Left over spaces



Be conscious of your balcony's aspect when selecting plants to ensure they will flourish in the light conditions whether sun, part shade or full shade.

Automatic watering systems are the best solution and will ensure your plants still thrive even if you are on holidays.

Balconies

Apartments make up the majority of the residential building stock in the City of Perth with many including private balconies. Balconies provide a fantastic opportunity for urban greening at the micro-scale.

Planning requirements

Strata body limitations – there may be some limitations imposed by your strata body. These may limit what you can incorporate on your property whether it be on your balcony or any vertical planting which may be reliant on the building for support. It is worth checking these prior to commencing any greening initiatives.

Planning /building approval – no formal approval is required for Micro Greening which does not incorporate building works.

Safety considerations

Building loading – people wanting to install large pots or planters must consult with building owners or strata managers to ensure their balcony does not have weight restrictions. Not all balconies may be able to accommodate the increased weight. The watering of pots or planters will increase the overall weight on the balcony.

Safe placement of pots – pots and planters should be placed where they pose no risk of becoming climbable, particularly when placed close to balcony balustrades or handrails. This is particularly important if children will be using the area. They should also not be fixed to the outside of balustrades where they could become a danger to those below.

Safe access for watering and maintenance – ensure that any plantings are located within easy reach for maintenance or hand watering.

Key considerations

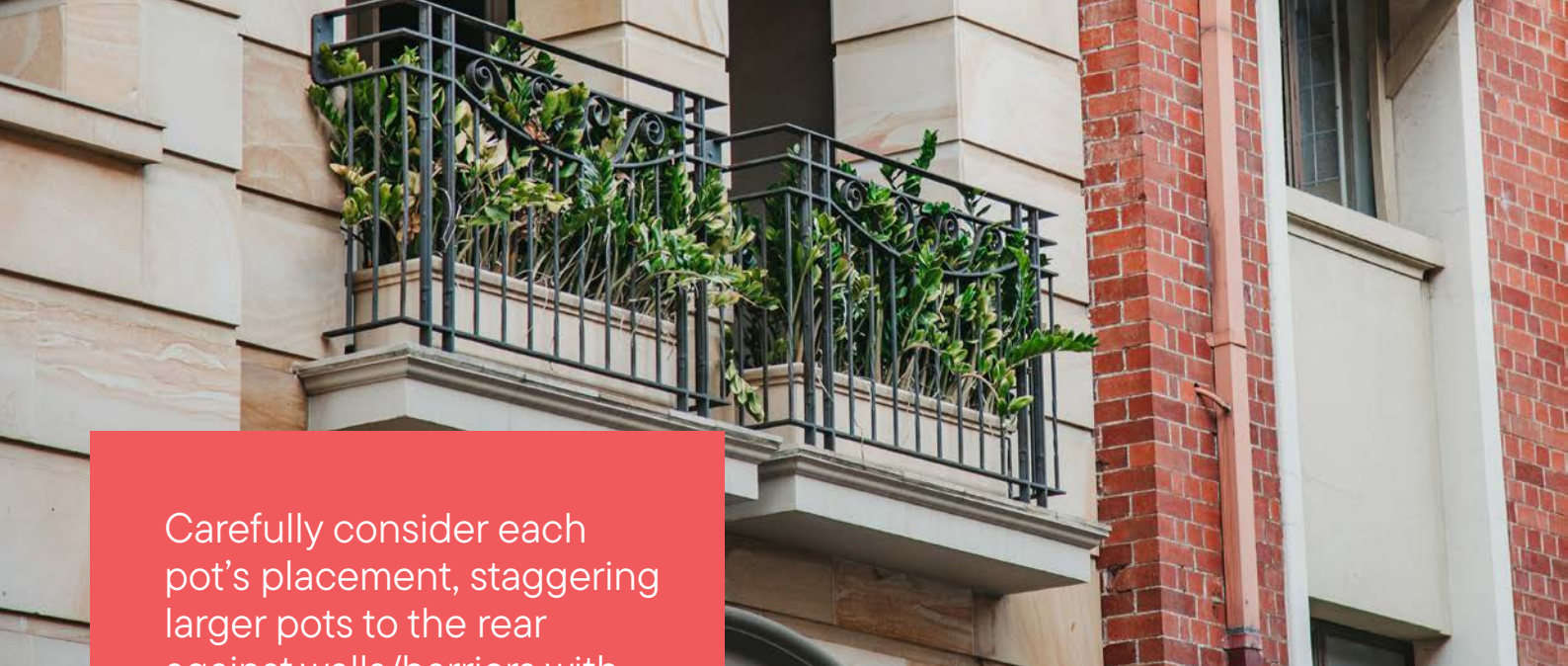
Solar aspect – be conscious of your balcony's aspect when selecting plants to ensure they will flourish in the light conditions whether sun, part shade or full shade. Refer to Environmental Considerations for more information.

Impact of wind – consider the effect of strong winds which can dry out pot plants very quickly. Some plants may even get damaged if exposed to frequent strong winds. You may need to consider robust resilient plant species for your balcony if it is not well protected. Further information can be found under Environmental Considerations.

Maximising space – consider the placement of your balcony pots or planters to ensure the space is still functional and accessible. Where floor space is not available, hanging pot plants is another great way to add greening to your area.



Small residential balcony example



Carefully consider each pot's placement, staggering larger pots to the rear against walls/barriers with smaller pots in front.

An example of a West facing residential balcony planter using Zig Zag plants

Planting opportunities

Living walls – these can include climbers/vines which grow up or cascade down a vertical surface. They can assist in reducing the effects of prevailing winds and/or provide privacy to your balcony. A support framework may be required, however there are self-clinging species available which can easily adhere and grow up many different surfaces. You may also consider incorporating a staghorn fern (*Platycerium superbum*) as a great focal point.

Pots/planters – pots and planters are an easy way to liven up any balcony. Carefully consider each pot's placement, staggering larger pots to the rear against walls/barriers with smaller pots in front. This is better for maintenance access and looks good too!

Vegetated pergolas – sitting under a softly shaded, living canopy is a sheer delight. There are numerous robust, vigorous climbers/vines which create a vegetated roof within a couple of years but be careful to keep an eye on them and trim them back as they can grow onto adjoining properties.

Window boxes – many innovative planters are available in today's market which can safely attach to window frames or window ledges with self-watering systems for ease of maintenance. These can look particularly attractive if you have a set of them with a similar planting style in each. For safety reasons, window boxes should not project over property boundaries into the street, above footpaths, or into adjacent properties. Where they pose a risk of falling, they should also be secured.



A staghorn (*Platycerium superbum*) makes a great focal point

Impact on adjoining properties – consider the impact of your balcony garden on neighbouring residents. Some highly fragrant plants for example may cause irritation for some people. Vines should not become overgrown and encroach on neighbouring balconies.

Watering – carefully consider how your plants will be watered on a regular basis. Potted plants will tend to dry out more readily than plants in the ground and most plants like consistent moisture levels over the warmer growing seasons. Automatic watering systems are the best solution and will ensure your plants still thrive even if you are on holidays. Be mindful water does not overflow from your balcony onto surfaces below. Refer to Sustainable Water Use.

Interior Spaces

There are various interior environments of different scales which could cleverly incorporate plant life. These include courtyards, cafeterias, covered walkways and internal hallways.

Planning requirements

City of Perth building requirements – it is worth checking with the City to see if there are any permits or applications required relating to the work you are looking to undertake i.e. fire hazard, egress, historical restrictions.

Planning/building approval – no formal approval is required for Micro Greening which does not incorporate building works.

Interior potted plant at building entry



Even with limited light there are low, medium or high light level indoor plants available which will thrive in these locations.

Safety considerations

Safe placement of pots – it is important to consider main pedestrian/vehicular movements in these spaces, so pots do not become a hazard or block exit or entry points. Their location should also be easily accessible for hand watering and ongoing maintenance.

Designing out crime – the height and position of these plantings must comply with Designing Out Crime principles. For further information go to Department of Planning, Lands and Heritage Designing Out Crime Planning Guidelines at <https://www.wa.gov.au/system/files/2023-07/safer-places-by-design-cpted-guidelines.pdf>

Key considerations

Solar aspect – interior spaces usually receive only indirect sunlight through windows, atrium roof glazing or skylights. Even with limited light there are low, medium or high light level indoor plants available which will thrive in these locations. For more information refer to Environmental Considerations and Recommended Plant List.

Dust – many internal plants have large or wide leaves which due to the lack of wind, collect dust. To maintain a high level of presentation, it is important to regularly wipe the leaves with a wet cloth to bring out their lush appearance.



Low level interior planting beneath shop counter



Potted plants suspended in shopfront

Plant rotation – the main source of sunlight in many interior environments enters from one direction resulting in irregular plant growth as they lean towards this light. To overcome this, it is important to rotate/turn each plant regularly.

Watering – large internal planted displays would typically be automatically irrigated, however if you have several individual pots within your internal space, hand watering may be a better option. Self-watering pots are also worth considering. Refer to Sustainable Water Use.



Indoor display of potted and hanging plants

Planting opportunities

Pots/planters – are a versatile means of incorporating greenery into an internal space whether small or large, pots and planters come in a range of sizes and styles.

Hanging planters – these are great if you are lacking floor space but just make sure you have a sturdy ceiling to support the planter.

Vertical climbers – climbers are a simple and effective way to achieve a lush green backdrop. They can soften any hard urban surface and even make spaces appear larger. Select climbers which can thrive in your light conditions and ensure you are able to prune them should they grow beyond your space.

Small trees – well positioned tree(s) can make a huge impact in any contained urban space, both visually and in terms of health and wellbeing benefits. Carefully consider the tree's ultimate mature size when selecting species and ensure it has sufficient soil mass surrounding the root ball whether it is in a pot or in the ground. Refer to Recommended Plant List.



Pots and planters are a versatile means of incorporating greenery into an internal space whether small or large, they come in a range of sizes and styles.

Pots in steel cages used as room dividers and privacy screening

Shop Fronts

Shop fronts typically offer light, bright locations for plants to thrive. With clever spatial design, plant life can enhance the shop's display products and entice passers-by to take a closer look, even in confined spaces.

Planning requirements

City of Perth building requirements – it is worth checking with the City to see if there are any permits or applications required relating to the work you are looking to do i.e. fire hazard, egress, historical restrictions. No approvals are required for movable shop front planters.

Planning/building approval – no formal approval is required for Micro Greening which does not incorporate building works.

Safety considerations

Safe placement of pots – avoid pots/planters becoming a potential obstruction or hazard for shop users. Pots and planters should be located within the property boundary.

Hazards with watering – it is important to ensure water doesn't drip or collect on the floor and become a slip hazard. Self-watering pots are an easy contained system to eliminate this issue.

Key considerations

Solar aspect – shop fronts typically have floor to ceiling glazing making them a great light filled location for plants. Less light will enter your shop if it faces south or it is overshadowed by nearby buildings, however there are many indoor plants available that can tolerate low light conditions. For further information refer to Environmental Considerations and Recommended Plant List.

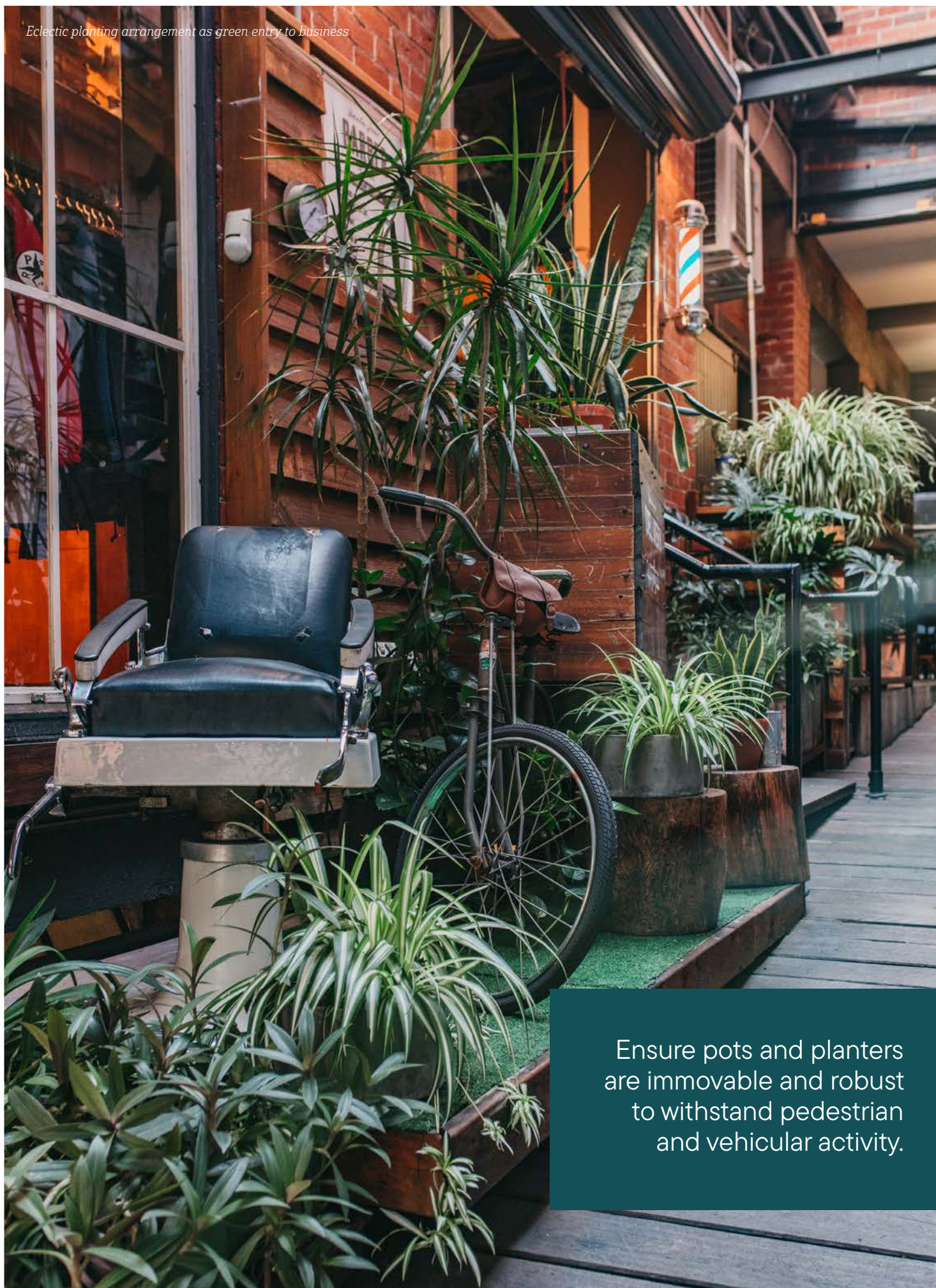
Dust – many internal plants have large or wide leaves which due to the lack of wind, collect dust. To maintain a high level of presentation, it is important to regularly wipe the leaves with a wet cloth to bring out their lush appearance.

Plant rotation – the main source of sunlight in many interior environments enters from one direction resulting in irregular plant growth as they lean towards this light. To overcome this, it is important to rotate/turn each plant regularly.


To maintain a high level of presentation, it is important to regularly wipe the leaves with a wet cloth to bring out their lush appearance.



Movable planter with castors.



Ensure pots and planters are immovable and robust to withstand pedestrian and vehicular activity.



Consider training your staff so they are aware of the plant's maintenance requirements to share the load!

Potted plant at shop entry

Watering – it is recommended that hand watering is undertaken for the small shop front plant displays. Consider implementing a staff roster to ensure sufficient watering is undertaken. Refer to Sustainable Water Use.

Maintenance – while most indoor plants are low maintenance, it is important to regularly monitor their health and appearance. Refer to Sustainable Water Use for signs of over-watering/under-watering. Consider training your staff so they are aware of the plant's maintenance requirements to share the load! Alternatively, you can engage landscape contractors to oversee this role.

Vandalism/theft – this is particularly important if you are positioning pots or planters outside your shop. If they are not large and heavy items, consider movable pots with castors which can be moved inside the shop at the end of the day.

Planting opportunities

Pots/planters – simple arrangements of three pots or even one large pot will have a big impact in a shop front to passers-by. Make sure you select similar pot styles and plants that create a cohesive theme which balances with the rest of the shop's interior.

Window boxes – window boxes are a great way to add some colour and life to a plain window. Ensure the plantings are kept reasonably low to avoid reducing the natural light into the shop. Cascading vines work well in window boxes but make sure they are regularly trimmed. For safety reasons, window boxes should not project over property boundaries into the street or into adjacent properties.



Plants incorporated into shop window display.



Built-in window box with planting.

If you are hand watering with a hose, also be conscious that the hose doesn't become a trip hazard.

Left Over Spaces

The city is full of left over spaces which perform primary, utilitarian functions including vehicular access routes, bin storage areas or pedestrian alleyways. Yet the majority of these spaces are harsh and unattractive with amazing potential to be transformed through the incorporation of simple urban greenery.

Planning requirements

City of Perth building requirements – Prior to creating your piece of micro greenery, it is essential to understand any requirements or restrictions. Speak with the City to enquire whether planning approvals are required, particularly in relation to structures, pergolas, garden sheds, misting systems and water tanks.

Dial before you dig – If you are planning on digging into the natural ground, you should undertake a 'Dial before you Dig' assessment prior to any excavation or construction work. This will assist in understanding the location of above and below ground services on your property and may impact your landscape proposals.

Planning/building approval – no formal approval is required for Micro Greening which does not incorporate building works.



Planting in a narrow garden bed in laneway

Safety considerations

Safe placement of pots – It is critical to consider the pot or planter locations so that they don't impede pedestrian/vehicle circulation routes and their sight lines. Pots and planters should be located within the property boundary.

Hazards with watering – care should be taken when watering to avoid water spilling on surrounding surfaces and becoming a slip hazard. Temporary signs informing passers-by of this potential hazard could be an option. If you are hand watering with a hose, also be conscious that the hose doesn't become a trip hazard.

Designing out crime – ensure the planting doesn't create a potential hiding spot where antisocial behaviour could occur. Hedges and bushy shrubs should be avoided unless adjacent to existing borders, walls, or retainers.

Sightlines – planting should be kept low in areas where vehicles operate, such as laneways so drivers have clear sightlines to pedestrians or other motorists.

Wind tunnels are common in city environments and create quite difficult windy conditions for plants to thrive.



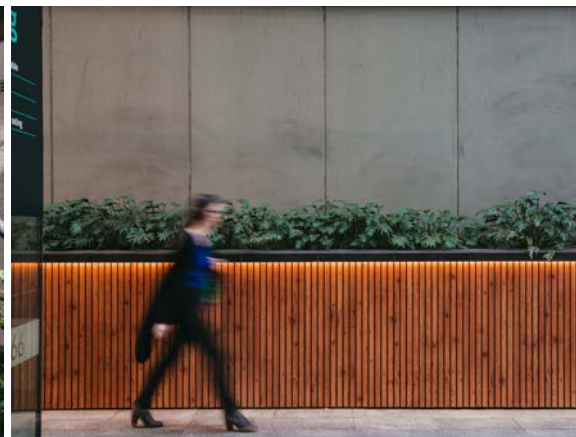
Planters fixed to wall in courtyard



Built in window box with planting



Planting around emergency stairs on rooftop



Raised planting along building entry

Key considerations

Solar aspect – often laneways and leftover spaces are situated in deep shade, so it is worth tracking the amount of direct sunlight it receives (if any) to select the most appropriate plants. Refer to Environmental Considerations for sunlight information and the Recommended Plant List for plant species options.

Wind – wind tunnels are common in city environments and create quite difficult windy conditions for plants to thrive. Refer to Environmental Considerations for ways to minimise the impact of wind.

Watering – refer to Sustainable Water Use.

Vandalism/theft/robustness – it is important to consider the potential for vandalism in these locations. Greening options should align with crime prevention principles and be robust enough to withstand regular pedestrian footfall and vehicular movements.

Planting opportunities

Living walls – there are lots of opportunities in these left-over spaces to establish a climber on walls simply and effectively with a big impact! Refer to the Recommended Plant List for climber species options.

Pots/planters – if you are considering pots, make sure they are either self-watering or suitably large, so they don't dry out quickly. Also ensure they are immovable and robust to withstand pedestrian and vehicular activity.

Vegetated pergolas – These are a great way to create a lovely shaded area to sit under. Check with the City to ensure your proposal adheres to their planning requirements before building.

Window boxes – A simple, cost effective way to transform a building's appearance. Make sure they are easy to access for watering and maintenance and are secured appropriately to the building to prevent them falling off. For safety reasons, window boxes should not project over property boundaries into the street, into adjacent properties, or over footpaths.

The city is full of left over spaces which perform primary, utilitarian functions including vehicular access routes, bin storage areas or pedestrian alleyways. Yet the majority of these spaces are harsh and unattractive with amazing potential to be transformed through the incorporation of simple urban greenery.



Potted plants inside privately owned parking area




Environmental Considerations

Whether you are up on a balcony or down in a shaded laneway, it is important to understand the two main environmental aspects that affect all gardens to varying degrees – sun and wind.

Maximising solar efficiency

Amount of sunlight

Before selecting any plants, it is important to track the sun over your intended planting area to see how many hours of sun it receives. This should be done whether you have an outside space or indoor spot. Once you have this information, you can then select the best plants for the light conditions. For outside plants, light is categorised into the following:

		
Full Sun	Part Shade	Full Shade
6 hours or more of direct sunlight per day	between 2-6 hours of direct sunlight per day	less than 2 hours of direct sunlight per day

For indoor plants, be aware that sunlight through a window is not as strong as the direct outside sunlight and the intensity of the light rapidly reduces the further the plant is from the window. For indoor plants, light is categorised into the following:

High Light Conditions – direct light or bright sunlight, close to a north facing window

Medium Light Conditions – good sunlight but plants are located further from the windows

Low Light Conditions – little to no sunlight and only soft artificial light

Useful tips

Most urban inner-city environments will be shaded for most of the day, due to the surrounding tall buildings. Before selecting plants, it is important to watch the sun track over your intended garden area to see how many hours of sun it receives. Most plant labels will indicate the whether the plant is suited to full shade, part shade or sunny conditions.



Mixed plants and pots at edge of alfresco coffee area

Be aware of ‘wind tunneling’, a term used to describe wind which is channelled down streets and open voids by the surrounding tall buildings creating areas of intense wind.

Avoid light plastic pots or plant species that tend to grow “top heavy” especially if you are on an exposed balcony as they will topple over in a strong wind.

Orientation

It is important to know what direction your urban space, window or balcony faces to gauge the intensity of light coming in. There are some useful tips for both indoor and outdoor conditions below:

South facing – these tend to have the weakest light intensity and are often in relatively deep shade, however there are many shade-loving plants which will thrive in these locations. Be conscious to move plants in these locations if indoors over the winter period to a sunnier spot or even outside to ensure they get sufficient light.

North facing – these urban spaces, if not interrupted by building shadows, receive the most sun and therefore are the best location for sun loving plants including vegetables, herbs and other edibles. If in direct outside sunlight, it is important to provide shade to these areas during the summer months as it will get very hot.

East facing – These spots benefit from the morning sun when the rays are not quite as strong. East facing aspects are often good for plants that need moderate sunlight or morning sunlight only.

West facing – These get the full afternoon and evening sun, which can be surprisingly strong in the summer. Although they don’t get the same intensity of light as northern exposures, a west facing position is a good place for your sun-loving plants.

Typical signs of insufficient light or too much light

Plants receiving insufficient light may have:

- Spindly growth
- New leaves that are smaller than existing ones
- Slowed growth
- Reduced or ceased flowering
- Variegated leafy plants turn solid green
- New shoots leaning or growing towards the light

Plants receiving too much light may have:

- Leaf burn
- Faded or washed out leaves
- Leaf drop

Wind

The effect of wind on plants can be detrimental if not properly understood. Wind can dry out the soil surrounding plants especially in pots, dehydrate the foliage (appearance of burnt leaves) and even blow over light weight or top-heavy pots/planters.

Pots and Planters

There is a huge variety of pots and planters available from expensive architectural pots to simple plastic tubs. The selection you make depends on your budget, the size of your urban environment and the style you wish to achieve.

Pot selection

Ensure the pot/planters have adequate drainage holes for water to drain away. There are many decorative pots that don't have any drainage holes, so it is important with these to plant into a separate smaller pot, usually a simple black plastic pot that has drainage holes, then conceal it inside the decorative pot. This method enables you to easily interchange plants into different styled pots for different effects without having to completely re-pot them.

Select a pot/planter that has sufficient additional soil around the plant's root ball, so they have space to grow. If the pot is too small, the plant will quickly become rootbound and will fail to thrive.

Some materials like terracotta are very porous and draw water from the pot's soil resulting in the plants needing frequent watering. To overcome this issue, select glazed pots or seal the pot on the inside.

There are many self-watering pots/planters available that have a concealed water reservoir in the base and use capillary action to draw water up through the soil to the plant. Watering them is simply undertaken via a special tube which is connected directly to the reservoir. Avoid overwatering as this can cause root rot.

If you are renting the premises or require the movable pots/planters, ensure you select lightweight pots or install castors on the base to avoid too much heavy lifting.



Terracotta pot



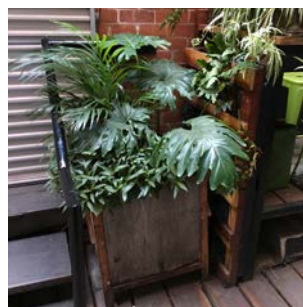
Plastic self watering pot



Concrete pots



Plant pot trolley



Upcycled and eclectic items used for planting



Terracotta pot in corner of a courtyard



A group of plastic pots hung from shop ceiling

In-ground planting

Benefits

- Use existing soil
- Won't dry out as much as pots/planters
- Less cost – no soil or pot(s) to purchase
- Won't get root bound and require re-potting regularly

Disadvantages

- Large plants may conflict with underground services
- Potential future damage to surface treatments and structures due to root growth
- Typically require soil improvement at time of planting
- Potential to be trampled and damaged by pedestrians or vehicles.

Pot/planter planting

Benefits

- Flexible arrangement which can be moved or reconfigured.
- Due to their elevated position within a pot, plants are easy to access and maintain
- Can easily change a style/mood of a space by changing a pot/planter.

Disadvantages

- Need re-potting regularly (depending on pot size).
- Will require more watering than in-ground planting.
- Pot/planter will deteriorate over time and need replacing.
- Higher chance of theft/vandalism than plants in the ground.
- More cost – soil and pot(s) to purchase.

Soil Conditioning, Nutrition and Fertilising

Good soil is the key building block of healthy plants. Healthy soil contains living organisms vital for the health and well-being of plants in the garden, but remember: different plants need different soils, so take the time to get this right to ensure your plants thrive.

Selecting the right potting mix

Potted plants

There are many potting mixes available on the market today. It is important to select a quality potting mix that is suited to the plants you have chosen. Ask your local nursery or check the label to find out what's best for your plant. For example:

- **Native plants** need a potting mix with low or no phosphorus. Australian soils are naturally low in this nutrient and native plants have adapted to this over time.
- **Succulents** require a free draining mix with limited organic matter. They will thrive in loose, grainy soil mix containing sand or perlite.
- **Fruit trees** including citrus need a nutrient-rich growing environment such as loamy soil with a high organic content.
- In addition to drainage and organic content, other important characteristics include acidity/alkalinity, nutrient ratios and trace elements.
- Choosing a potting mix that is certified to meet Australian Standards will ensure it is free from any weeds, disease or pathogens.

In-ground planting

Plants grow best in soils they are suited to. Amendments and conditioners can help improve your soil, but the best approach is to first determine the characteristics of your local soil. What is the texture and consistency like? Does water pond or drain away quickly? What else grows well in your local area? Considering these factors will help to ensure the long term success of your plants.

Example of high quality soil



Healthy soil contains living organisms vital for the health and well-being of plants in the garden.

Recommended soil conditioners

Types

Soil conditioners are used to improve existing soils for in-ground planting.

Perth soils are predominately sandy with low nutrient content so may benefit from soil conditioners to help increase their microbial activity and fertility as well as the soil's moisture and nutrient retention capacity. There is a variety of soil conditioners available including:

- Clay (bentonite) increases the water and nutrient holding capacity of sandy soils
- Soil wetting agents act like a detergent to break down the waxy coating on water-repellent soil particles to allow water to penetrate the soil profile
- Mineral soil amendments (such as spongolite or zeolite) are an alternative to clay and are naturally occurring materials that have the ability to hold nutrients and prevent leaching
- Water storing granules are manufactured polymers which absorb and retain water. As the granules degrade, they release water into the plant's root zone, helping to maintain soil moisture.



01 - Soil wetting crystals



02 - Soil wetting agent



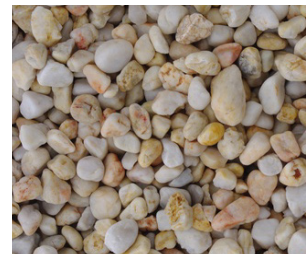
03 - Organic soil conditioner



04 - Bark mulch



05 - Straw mulch



06 - Gravel or pebble mulch

Application rates

Clays and mineral soil amendments should be applied as per the manufacturer's application rate which is typically a single application mixed thoroughly into the top 25cm of existing soil.

Soil wetting agents should be evenly spread on the soil's surface.

Mulch

Mulch dramatically improves moisture retention by reducing evaporation from the surface of the soil. It also provides essential nutrients as it breaks down, helps to suppress weeds and insulates plant roots from extreme temperature fluctuations. It is important to maintain an even 5-10cm deep layer of organic, coarse mulch across all your garden beds.

Choosing a mulch that is certified to meet Australian Standards will ensure it is free from any weeds, disease or pathogens.



Useful tips

Ensure a face mask is worn during the application of any soil amendment to prevent inhalation of material or associated micro-organisms. When sourcing organic soil conditioners and mulches, check that they are sourced from an accredited composting facility or if bagged, they should have these labels on the bag. Mulches should be weed and pathogen free.

Recommended fertilisers

Types

If fertiliser is required, consider a controlled release or organic fertiliser. Don't forget — different plants have different needs! Make sure you match the nutrient profile of your fertiliser to suit your plants. For example, most native plants are very sensitive to phosphorus and will not tolerate high levels.

Controlled release fertilisers, also known as slow release fertilisers, are coated compressed pellets and release nutrients over a longer period of time because they are not water soluble.

Organic fertilisers are derived from plant and animal by-products. Some organic fertiliser types include; blood and bone, bagged manures, and rock mineral-based fertilisers. They:

- Improve soil structure and its water retention ability
- Introduce micro-organisms into the soil which aids nutrient uptake by plants.

Application methods

There are three main application methods for applying fertilisers including:

- Deep soil application or 'digging' is the best method of mixing organic fertilisers into the soil prior to planting.
- Hand broadcasting if applied correctly, can provide an even distribution of fertiliser to the required area.
- Liquid application is an effective method of applying fertiliser as plants can uptake nutrients quickly. It is important to ensure you don't over apply, so refer to the product packaging for application rates. Frequent light applications are better than heavy, infrequent applications.
- Apply fertiliser at the manufacturer's recommended rate. If the plant looks healthy and happy, you probably do not need to fertilise.

Applying liquid fertilizer to provide nutrients to your plants



Don't forget — different plants have different needs! Make sure you match the nutrient profile of your fertiliser to suit your plants.

Sustainable Water Use

As Perth is in a drying climate it is paramount that all aspects of micro greening including plant species selection, methods of watering and plant installation (pots/planters or in ground), are carefully considered. We want to be efficient in our water use so our plants and gardens thrive and our water usage is minimal.

Typical signs of under and over watering

It is important to make sure your plants are getting enough water. And while it is common to forget to water your plants, you can overwater your plants too. Here are some signs to look out for to avoid over or under watering your plants.

Over watering signs may include:

- Wet and wilted leaves
- Evidence of root rot, e.g: roots discoloured, slimy and break apart easily.
- Leaves begin to yellow and may turn brown
- Black spots develop on leaves
- Excessive leaf drop
- Distinctive moldy, wet smell
- Saturated soil
- Small, flying insects or gnats
- Under watering signs may include:
- Soil is dry
- Wilted or curling leaves
- Slowed growth
- Yellowing of the leaves
- Leaves or stems noticeably dry or brittle.

Water saving technology

These can be inexpensive devices that are easily fitted to most automatic irrigation systems and can save water.

- Evapotranspiration sensors and weather stations will adjust the irrigation cycle based on the current climatic conditions and the plant's estimated water demand.
- Rain sensors disconnect the automatic irrigation system controller temporarily when rainfall has occurred.

- Soil moisture sensors modify the irrigation run time based on the amount of moisture in the soil.



Useful tips

Typically, potted plants dry out quickly so consider self-watering pots that have their own water reservoir. This is particularly important when you intend to go away for a couple of days or in hot weather. For standard pots, make sure excess water runoff is collected in pot saucers, but ensure pots are not left in standing water for lengthy periods, or this may cause root rot.

Plants require more water in summer than in winter and this includes indoor plants.

Be aware that terracotta pots (unless they have been sealed) are porous and dry out quicker than plastic or concrete pots. It is best to water in the morning to give plants a good start to the day. Different plants have different water needs. A general rule of thumb is, if the top couple of centimetres of soil is dry then it is time to water your plants.



A mix of potted trees and plants to green and soften interior courtyard area

Hand Watering vs Irrigation System

Hand watering

Manually watering plants with a hose or watering can.

Benefits

- Simple, cost effective set up
- Good for small spaces with a limited planting area
- not subject to failure of technology / power outages
- can adjust watering regime to suit individual plants

Disadvantages

- Takes time, depending on the amount of plants
- Difficult to provide an even watering so under and over watering may occur
- Be aware if using a hose, especially in a public area, as it can become a trip hazard
- commercial premises may be reliant on staff, with the risk that plants are not watered as needed

Automatic irrigation system

Programmable electronic timers which switch irrigation stations on and off at specified times.

Benefits

- Are convenient and save time
- Can be easily adjusted (or automatically self-adjusted) to suit the climatic conditions/seasons
- Reduce the likelihood of over or under watering when managed properly.

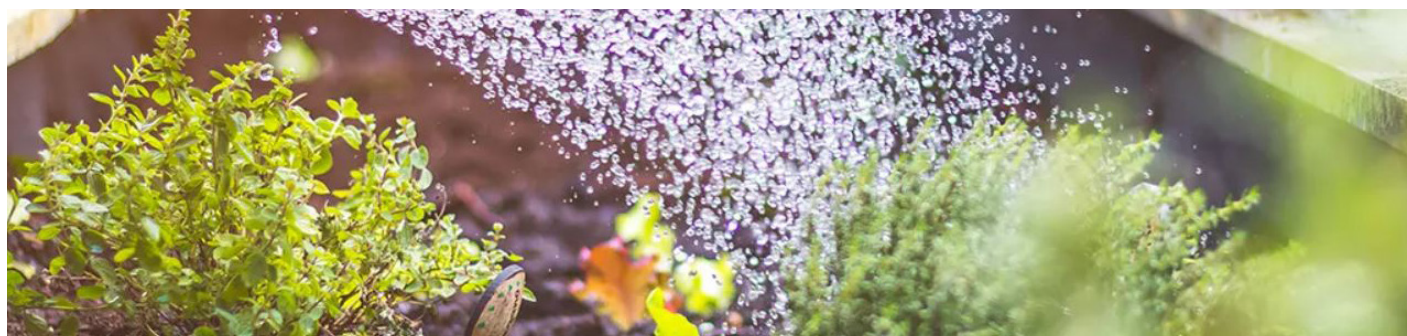
Disadvantages

- More expensive and complicated to set up than simply hand watering
- Need access to a water source and a concealed location (yet accessible) for the irrigation controller and valves etc.
- Subject to failure of technology / power outages
- If you have lots of individual pots, there will be irrigation pipes visible.
- May also rely on wifi signal and other comms.

Considerations

Is it a manageable planting area that is easily accessible and won't take too much time to water if watering by hand?

Will you be able to implement a regular watering routine (i.e. with staff members) if you are hand watering?



Water Use For Urban Cooling

We all know that water has a critical role to play in helping our plants to survive and thrive in Perth's dry climate. What is less well known is that where we place plants, what we plant them in and how we water them can help create more thriving micro green areas, which provide small, localised cool zones around our buildings and much needed respite from higher city temperatures.

Where to plant

Plants are a great way to improve the thermal performance of a building. They can help reduce the interior daytime temperature and in turn enhance comfort and lower energy costs.

Cleverly positioned trees, vegetated pergolas or climbers can help to shield your building from the harsh summer sun. However, care should be taken to avoid adversely affecting your neighbour's thermal performance.

Where there is adequate space above and below ground for the tree canopy and root system, tree planting can provide shade from the overhead sun.

Other micro greening opportunities such as adding plant modules to create green walls, growing climbing plants up or down a wall to create a green façade, overhead greening (e.g. vegetated pergolas) or ground cover to paved courtyard areas, podiums or rooftops can also help alleviate the impact of urban heat generated by hotter hard surfaces such as walls and paved areas.

How to water for urban cooling

Recent research has found that air temperatures can be reduced by choosing how and when to water. Subsoil drip feed irrigation is a water efficient way to supply the required water to plants, but in addition, the flash watering technique (a quick 30 second spray via hand watering or spray reticulation) and

misting systems have been shown to be very water efficient way of reducing temperatures further.

- Subsoil drip feed irrigation is a more water efficient irrigation technique (to spray reticulation) as the potential evaporation is reduced, and water is fed directly to the root system.
- Flash watering (a quick 30 second spray via hand watering or spray reticulation) of a leafy tree canopy or overhead vines/climbers can reduce air temperatures by up to 10 degrees for half an hour. This can have the same cooling effect as an evaporative air conditioner.
- Installing misting systems to overhead greening in courtyards has a similar cooling effect to flash watering but it is a more permanent system which can be more aesthetically pleasing.
- Smart systems can be used to reactivate the misting system once air temperatures rise to help keep the level of cooling achieved constant over a longer period.
- Misting systems have lower energy costs and are cheaper to run compared to air conditioners. Depending on their design they can also be used to provide cooling during power outages.
- While misting systems can be used on their own to reduce air temperatures, combining them with greening is more effective. It helps to prolong cooling effect to up to 10 minutes.

Reducing your shower time by one minute will create enough water to enjoy an hour of cooler temperatures from flash watering and two hours from misting.

What water to use

Using fit-for-purpose water sources is important when considering what water we use and where we can save water. Reusing water (greywater or recycled wastewater) reduces our water demand and, if delivered through a separate network, it can be safely used for a range of purposes.

If you are considering installing a misting system, it is important for health reasons that they are connected to the household mains water supply and are well maintained. You should also;

- check with your strata body for any limitations on what you can do on your property
- speak with the City to see if there are any permits or applications required relating to the work you are looking to undertake i.e. egress, historical restrictions.
- take care to avoid water creating a slip hazard or damaging either your own or your neighbour's property.

But using greywater for other irrigation options is an effective and sustainable way to supply water for irrigation and cooling options when administered appropriately.

Want to know more?

For further information check out Water Sensitive Cities Australia's guide to using water to cool residential outdoor spaces [Water sensitive Cities Australia (2023). *Practice Guide - Cooling (Lot Scale)*. Melbourne, Australia: Water Sensitive Cities Australia] and SA Water's website www.sawater.com.au/my-home/saving-water/in-your-garden and the Department of Health's Code of Practice for the Reuse of Greywater in Western Australia 2010.

Flash watering of a leafy tree canopy or overhead vines/climbers can reduce air temperatures by up to 10 degrees for half an hour.



Outdoor courtyard with high quality greenery in Northbridge

Plant Selection

Once you understand the type of area you are planting as well as the specific environmental considerations. Now comes the best part, choosing the plants.

Considerations for selecting the right plant

When selecting plants for your urban space, try to choose plants that bring the space to life and complement the surrounding environment, whether it's a shop front, apartment balcony, interior space or laneway. The following attribute for each plant should be taken into consideration:

- **Mature size** – any selection should allow the plant to reach its full mature size
- **Growth rate** – is the plant a fast grower, which will require more maintenance or a slow grower, which will take longer to reach the mature size
- **Form** (i.e. groundcover, shrub, climber, tree, etc) and whether the plant works best as a striking individual statement or as part of a mass planting
- **Leaf and/or flower colour** – the visual interest and seasonal colour which will make your area interesting
- **Evergreen or deciduous** – seasonal colour but will drop more leaves and require additional maintenance, or evergreen providing year round foliage, cover, and shade
- **Fragrance** – some plants have flowers which produce great scents and smells
- **Preferred plant location** – plants will thrive in certain positions, but not in others; it's important to consider if fruit or flowers will attract insects, and let this inform a suitable location
- **Maintenance requirements** – certain species will be more work than others to keep looking good year round



Useful tips

It is worth keeping your planting palette relatively simple to avoid a cluttered appearance. Layer your display with taller shrubs/trees to the rear and smaller shrubs or groundcovers in front. Don't be afraid to ask the nursery any plant details, as they can be a wealth of knowledge.

Recommended Plant List

Exotic Climbers & Ground Covers



Waterwise



Full sun



Part sun



Full shade



Insect attracting



Bird attracting



Balconies



Interior spaces



Shop fronts



Leftover spaces



Epipremnum aureum | Devil's Ivy

Mature Size: Trails up to 20m

This versatile, popular indoor climber has attractive marbled green, white and yellow foliage. It is easy to grow and makes a great vertical statement cascading down furniture or balconies.



Ficus pumila | Climbing Fig

Mature Size: Climbs up to 10m

This vigorous, evergreen climbing plant is well suited to shaded conditions. It proves popular for its ability to cling to brickwork and/or fences and cover parts in an attractive green display.



Bougainvillea sp. | Bougainvillea

Mature Size: Climbs up to 5m

There are numerous cultivars in a wide range of colours. Prefers a free draining soil and will thrive in full sun or part shade. The sap is mildly toxic. This plant develops woody spikes which can cause painful injuries.





Trachelospermum jasminoides | **Chinese Star**

Mature Size: Climbs up to 5m

This very popular jasmine has an amazing fragrance when it flowers. It has attractive dark green glossy foliage. Great for screening bare walls or as a dense ground cover.



Hedera helix | **Common Ivy**

Mature Size: Climbs up to 10m

Fast-growing, self-clinging climber is great for greening bare walls or fences. Popular because of its ornamental foliage, this ivy can be used as a ground cover, in hanging baskets or trained as a topiary.



Convolvulus mauritanicus | **Ground Morning Glory**

Mature Size: Climbs up to 3m

This fast growing ground cover requires moderate watering with good drainage and can tolerate poor soils. Prefers full sun, and has an abundance of lavender flowers from spring to autumn.



Mandevilla sanderi | **Brazilian Jasmine**











Mature Size: Climbs up to 5m

A hardy climbing plant with masses of large, trumpet shaped flowers that come in shades of white, yellow, pink, and red. Plant in a sunny spot with good drainage and water regularly.



Recommended Plant List

Native Climbers & Ground Covers

- | | |
|--|---|
|  Waterwise |  Bird attracting |
|  Full sun |  Balconies |
|  Part sun |  Interior spaces |
|  Full shade |  Shop fronts |
|  Insect attracting |  Leftover spaces |



Acacia saligna prostrate. | **Coojong**

Mature Size: Climbs up to 3m

The perfect ground cover for garden beds or rockeries and looks stunning cascading down banks or retaining walls. It has beautiful blue-green foliage and masses of golden yellow flowers from early spring.



Hibbertia scandens | **Snake Vine**

Mature Size: Climbs up to 5m

Fairly vigorous climber is easy to grow. They have shiny green leaves and single buttercup like yellow flowers. They can grow along a fence or make a great ground cover.



Hardenbergia violacea | **Native Wisteria**

Mature Size: Climbs up to 5m

Quick growing climber has glossy dark green leaves and white or purple flowers in spring. They easily grow up fences and twist around poles. There are also new shrub varieties available and make a great mass planting display.





Dichondra repens | **Kidney Plant**

Mature Size: 0.1m x 0.3m

This ground cover is a great lawn substitute for partly shaded areas and is ideal between stepping stones or to fill small gaps. Prefers moist and well-draining soils, will tolerate light foot traffic.



Viola hederaceae | **Native Violet**

Mature Size: 0.1m x 1.0m

Native Violet prefers part or full shade in moist soil. It's a great substitute for lawn in shaded areas with minimal foot traffic. This fast growing, low maintenance plant flowers throughout the year but mainly in spring and summer. Flowers are edible, can be used as a garnish.



Casuarina glauca | **Cousin It**

Mature Size: 1.0m x 0.1m

This evergreen native ground cover is ideal for cascading down rockeries or retaining walls. Prefers full sun in well-draining soils. The dense, mounding form suppresses weeds and creates a stunning visual contrast, and looks great mass-planted.



Acacia cognata | **River Wattle – Limelight**

Mature Size: 1.0m x 1.2m

A compact form of this species with evergreen and vibrant lime-green foliage. Prefers a sunny, well draining position. The dense, weeping growth habit is great for deterring weeds and is low maintenance.



Recommended Plant List

Exotic Small Shrubs (less than 1.5m tall)



Waterwise



Full sun



Part sun



Full shade



Insect attracting



Bird attracting



Balconies



Interior spaces



Shop fronts



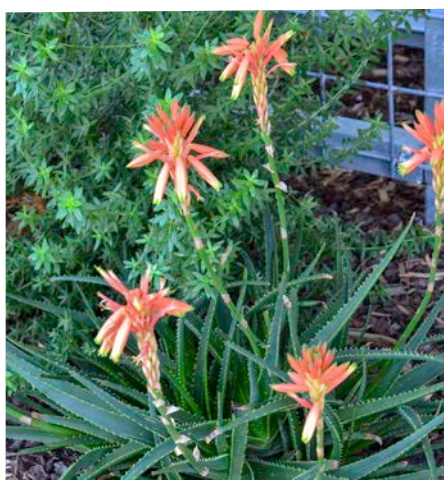
Leftover spaces



Agave attenuata | **Agave**

Mature Size (h x w): 1m x 1m

This incredibly hardy shrub makes a great feature plant if planted in mass or one in a pot. It is drought tolerant and low maintenance.



Aloe sp. | **Aloe**

Mature Size (h x w): 0.3m x 0.3m

There are many different Aloe's available with various flower colours from reds, pinks through to orange and yellows enabling them to suit any garden style/theme. They are extremely resilient and low maintenance.



Aspidistra elatior | **Cast Iron Plant**

Mature Size (h x w): 0.5m x 0.5m

Very hardy, drought tolerant plant that can thrive in the toughest of conditions. Their wide leathery leaves make a great statement, when planted in mass.





Crassula ovata | Jade Plant

Mature Size: 1.0m x 0.5m

This is a succulent plant with thick, lush, green round leaves. They work well in a modern minimalist garden in a feature pot. They are low maintenance and drought tolerant.



Liriope muscari | Lilyturf

Mature Size: 0.3m x 0.3m

This robust grass like herbaceous perennial with striking purple flower spikes. They work well if planted in mass and can thrive in various light conditions.



Monstera deliciosa | Swiss Cheese Plant

Mature Size: 0.3m x 0.3m

This lush, long lived plant with unique, large, slitted, heart shaped leaves makes a great versatile plant. It can easily cascade down furniture indoors or wrap itself up a fence or tree.



Spathiphyllum sp. | Peace Lily

Mature Size: 1.0m x 1.0m

These graceful plants are a popular indoor plant. They have long lasting white flowers and wide, lush green leaves. They are toxic to animals and children.





Syngonium podophyllum | Arrowhead plant

Mature Size: 1.5m x 0.5m

An ideal indoor plant that prefers bright, indirect light or full to part shade if planted outdoors. Low maintenance with attractive foliage, with several varieties coming in different shades of green.



Philodendron sp. Xanadu | Xanadu

Mature Size: 1.0m x 1.0m

This lush, compact plant has attractive lobed leaves. It requires medium indoor light conditions and looks great when planted in mass.



Senecio serpens | Blue Chalk Sticks

Mature Size: 0.3m x 0.2m

This unusual succulent with its fleshy grey/blue finger leaves makes a great low maintenance spreading shrub. It is drought tolerant and works well if planted in mass along with other succulents.



Sansevieria trifasciata | Mother in Law Tongue

Mature Size: 1.0m x 1.0m

Striking, architectural plant with thick, long leather leaves makes a great statement to any environment. They are very robust plants that can thrive in difficult conditions and help remove toxins from the air.





Chlorophytum comosum | Spider Plant

Mature Size: 0.3m x 0.2m

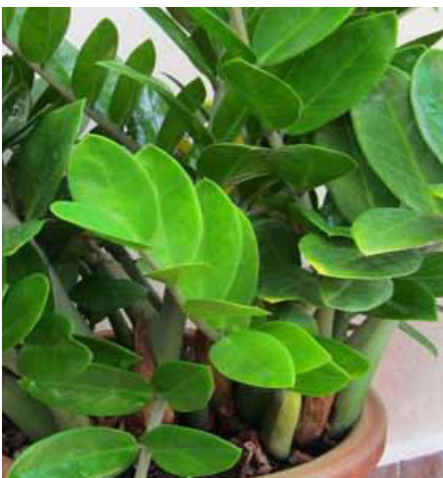
The Spider Plant is a popular, familiar plant because it is a practically foolproof choice for novice gardeners. These tough little houseplants are not just easy to take care of: they are actually hard to kill!



Sedum rubrotinctum | Jelly Bean Plant

Mature Size: 0.1m x 0.5m

An evergreen succulent perennial, the leaves are jelly bean shaped, green with red-brown tips which turn to bronze in summer. Sedums need very little attention or care and will do just as well in less hospitable areas.



Zamioculcas zamiifolia | ZZ Plant

Mature Size: 0.5m x 0.5m

This distinctive shrub resembling a small palm is a robust easy-care plant as it is tolerant to low light conditions and little water. It looks great as an individual potted feature or on mass in a larger planter.



Senecio rowleyanus | String of Pearls

Mature Size: 1.0m

A creeping, perennial succulent vine that has grey to green, grape-like leaves along weak, slender, pendant stems. Sprawling over the edges of containers or hanging baskets, the string of beads plant resembles a beaded necklace.





Platycerium superbum | **Staghorn**

Mature Size: Up to 1m wide

In nature, these ferns often grow high up in trees, but they can also be commonly grown on a cool moist south-facing wall with a timber backing. They do not like dense shade and should be protected from drying winds.



Echeveria sp | **Hen and Chicks**

Mature Size: 1.0m x 1.0m

The Echeveria succulent plant is just such a specimen, thriving on brief periods of neglect, low water and nutrients. The many varieties of Echeveria plants provide wonderful tones and texture for mixed beds and pots.



Zamia furfuracea | **Cardboard Palm**

Mature Size: 1.2m x 1.5m

It's a tough evergreen plant that gives a great tropical feel with its spike-free thick leaves and fleshy trunk. It doesn't need flowers to look appealing.



Pilea peperomioides | **Chinese Money Plant**

Mature Size: 0.3m x 0.3m

Prefers a well-draining potting soil, and a pot with drainage holes is necessary. If the leaves start to look slightly droopy, that's a sign that the plant needs water. Rotate it at least once a week to prevent it from getting lopsided.





Kalanchoe tetraphylla | **Flapjack**

Mature Size: 0.6m x 0.3

A succulent that forms a basal rosette of large, rounded, fleshy, stalkless leaves, which are grayish-green with red margins. The plant flowers from autumn to spring.



Tradescantia spathacea | **Boat Lily**

Mature Size: 0.4m x 1.0m

A clumping plant with bold leaves in shades of pink, purple and green. Fast growing plant with a compact growth habit and spreading nature. Can be divided and replanted.



Dracaena angolensis | **African Spear**

Mature Size: 0.6m x 0.3

Creates a stunning visual contrast, prefers bright filtered light or a partly shaded position in sandy, well-draining soil. Let the soil dry out between waterings. Will grow better with exposure to morning sun instead of powerful afternoon sun.



Ficus Elastica | **Indian Rubber Plant**











Mature Size: 1.5m x 1.0m

An ideal indoor plant that tolerates indoor light conditions and is recommended by NASA for it's air purifying properties. Better suited for pots, as roots can be invasive.



Recommended Plant List

Native Small Shrubs (less than 1.5m tall)

- | | |
|--|---|
|  Waterwise |  Bird attracting |
|  Full sun |  Balconies |
|  Part sun |  Interior spaces |
|  Full shade |  Shop fronts |
|  Insect attracting |  Leftover spaces |



Patersonia occidentalis | **Native Iris**

Mature Size: 1.0m x 1.0m

This ornamental clumping perennial has striking purple and white flowers similar to the Iris. This plant is endemic to Western Australia, and is drought tolerant.



Anigozanthos viridus | **Green Kangaroo Paw**

Mature Size: 1.2m x 0.6m

Prefers full sun or part shade and well-draining soil but can tolerate poor drainage as well as drought. Has distinctive green kangaroo paw flowers during late winter and spring. Alternatively, *Anigozanthos manglesii* or any of the many hybrids are great options in full sun.



Conostylis candidans | **Grey Cottonheads**

Mature Size: 1.0m x 1.0m

A hardy WA native shrub that is suitable for full sun or part shade. They bloom clusters of yellow flowers in winter and spring, and have grey-green foliage. A low maintenance plant that can tolerate drought and poor soils.





Astartea scoparia | Common Astartea

Mature Size: 1.5m x 1.5m

An open, upright shrub endemic to WA. Produces masses of white star shaped flowers through summer. Plant in a sunny position with well-draining soil. Tolerates light shade, drought, and poor soils.



Banksia nivea | Honeypot Dryandra

Mature Size: 1.2m x 1.2m

This evergreen shrub has attractive, fern-like foliage that produces and orange, dome-shaped flower in its centre. They thrive in full sun or part shade and is drought tolerant once established.



Asplenium australasicum | Birds Nest Fern

Mature Size: 1.5m x 1.5m

With fronds growing from a central point, this birds-nest shaped fern is an attractive small shrub that makes a dramatic feature plant. Keep in a shaded position as sunlight will burn the leaves.



Scaevola aemula | Fan Flower

Mature Size: 0.5m x 1.0m

Perfect for pots, hanging baskets, rockeries, or garden beds. Add colour to your garden with this hardy evergreen shrub that has beautiful fan shaped blue-mauve flowers year round, with peak flowering times in spring and summer.





Microsorium Diversifolium | Kangaroo Paw Fern

Mature Size: 0.3m x 1.0m

Displaying dark-green leathery fronds, this native fern has a low-growing, spreading habit. Ideal as an indoor plant or as under-planting, preferring full to part shade.



Adenanthos cunninghamii | Woolly Bush

Mature Size: 1.5m x 1.5m

An ornamental plant with soft, silver-grey foliage. Adds textural contrast to your garden and is best grown in part or full shade in well-draining soil. Has unusual red jug-shaped flowers in spring.



Acacia redolens | Vanilla Wattle

Mature Size: 1.0m x 3.0m

A low growing, trailing shrub native to WA with dark green foliage and blooms small yellow flowers in spring. Prefers full sun, is suitable for coastal areas, and is drought resistant once established. Ideal for rockeries, garden beds, or as ground cover.



Banksia attenuata Dwarf | Slender Banksia

Mature Size: 1.5m x 2.0m

The dwarf variant of this WA native favourite makes a spectacular feature shrub. Showcasing large yellow flowers in spring and summer, it is bird attracting and has striking serrated foliage. Plant in full sun or part shade in well-draining sandy soil.





Brachyscome iberidifolia | Swan River Daisy

Mature Size: 0.5m x 0.3m

This low growing annual daisy will add a colourful floral display to garden beds or containers. Plant seeds in autumn. Grows best in full sun with organically rich, well-draining soil however can tolerate poor soil and dry periods.



Orthrosanthus polystachyus | Morning Flag

Mature Size: 0.7m x 0.5m

A clumping plant with slender blue-green foliage that produces beautiful sky-blue flowers in spring. Prefers full sun or light shade in well-draining soil. Trim finished flower heads and older leaves.



Grevillea rosmarinifolia 'Jenkinsii' | Spider Flower

Mature Size: 1.0m x 1.0m

Grows well in a sunny position in well-draining soil. Tolerates drought and poor soils. Prune after flowering to maintain compact growth. Produces vibrant red flowers from winter to spring.



Lomandra longifolia | Spiny Headed Mat Rush

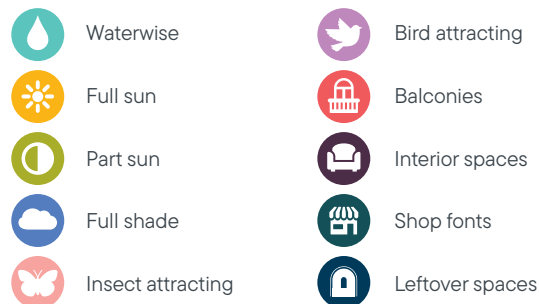
Mature Size: 1.0m x 1.5m

This mat rush is tough and versatile, able to grow in most soils and tolerates wet or dry conditions. Prefers full sun and has long flower spikes with fragrant yellow flowers in spring.



Recommended Plant List

Edible Plants



NOTE:

- Any fruiting species need to be managed so as to avoid stockpiles of spoiled fruit which may attract pests.



Thymus vulgaris | Thyme

Mature Size: 0.3m x 1.0m

A frost-hardy shrub that produces small, green leaves that release a strong aroma when bruised. White and mauve flowers are produced in summer. Its foliage is used for cooking, infusions (tea) and for medicinal purposes.



Petroselinum crispum | Parsley

Mature Size: 0.6m x 0.6m

Like other Parsleys it is biennial so you'll need to re-plant for the third year. Regular harvesting of small quantities by hand should be enough to keep it in good shape, otherwise keep watered in hot weather.



Salvia officinalis | Sage

Mature Size: 0.8m x 1.0m

This is a short lived perennial that looks lovely in pots. The foliage has a grey/green appearance and the surfaces of the leaves are softly woolly. The leaves are also quite aromatic and used in cooking.





Rosmarinus officinalis | Rosemary

Mature Size: 1.0m x 1.0m

Rosemary is a hardy perennial which can be grown as a low hedge or a cascading groundcover, if a prostrate variety is selected. Their leaves are commonly used in cooking.



Mentha viridis | Mint

Mature Size: 0.6m x 0.5m

Mint is a hardy, fast growing, perennial herb with serrated, crinkled green foliage that is pungently fragrant and the most used mint in cooking. It is highly invasive, so grow in a container only.



Ocimum basilicum | Basil

Mature Size: 0.5m x 0.3m

One of the most popular herbs for growing at home, basil is highly aromatic with an intense flavour. Plant in full sun or part shade in freely draining soil. Water regularly in warm periods. Suitable for pots and garden beds.



Coriandrum sativum | Coriander/Cilantro

Mature Size: 1.0m x 0.3m

Prefers a sunny position sheltered from wind. Water regularly and plant in well draining soil, as coriander won't tolerate over-watering.





Citrus japonica | Cumquat

Mature Size: 3.0m x 1.5m

Cumquats are an attractive small tree suitable for a pot on a balcony. They produce small fruit which can be made into jams and chutneys. They need regular feeding and watering and thrive in wind protected environments.



Solanum lycopersicum | Tomato

Mature Size: 2.5m x 0.9m

Growth height and spread will depend on variety. Tomatoes are a must-have for any produce garden, they are easy to grow and full of flavour. Plant in full sun with freely draining soil with protection from strong winds.



Vaccinium corymbosum | Blueberry

Mature Size: 2.0m x 0.9m

Growth height and spread will depend on variety. Berries are flavoursome and rich in antioxidants. Grows best in full sun, needs good drainage, and grows well in pots. Produces fruit throughout summer.



Fragaria ananassa | Strawberry

Mature Size: 0.2m x 0.6m

A low-growing groundcover, strawberries like a full sun position in freely draining soil. Avoid planting in soil previously planted with tomatoes, eggplant or potatoes. Water regularly, especially during root development. Bares fruit from late spring to autumn.





Pisum sativum | **Pea**
Mature Size: 0.3m x 1.8m

Growth height and spread will depend on variety. Plant in full sun in freely draining soil. Short lived plant with climbing growth habit, so install a frame for them to cling to. Avoid wetting leaves to reduce risk of fungal disease.



Phaseolus vulgaris | **Bean**
Mature Size: 2.0m x 0.4m

Growth height and spread will depend on variety. Plant in full sun and water regularly during dry weather. Avoid wetting leaves to reduce risk of fungal disease. Climbing varieties need a frame to cling to. Fertilise with a seaweed solution at flowering to improve yield.



Citrus latifolia | **'Tahitian' Dwarf Lime**
Mature Size: 2.0m x 1.5m

Grows best in fertile soil in full sun. Water regularly while establishing and through the warmer growing season. Will grow well in pots, fruits in late winter and early spring.













Citrus x meyeri | **Dwarf Meyer Lemon**
Mature Size: 2.0m x 1.0m

Dwarf citrus varieties are suited to urban environments where space is limited. They can be pruned into a hedge or make a feature in a pot. Like all citrus, Meyer Lemons need regular feeding and watering. They thrive in wind protected environments.



Recommended Plant List

Bush Tucker/Edible Native Plants

	Waterwise		Bird attracting
	Full sun		Balconies
	Part sun		Interior spaces
	Full shade		Shop fronts
	Insect attracting		Leftover spaces

NOTE:

- Some native Bush Tucker species are seasonal and suppliers are limited. Please ask your local nursery and the experts at [Tuckerbush](https://tuckerbush.com.au).



Tetragonia tetragonioides | Warrigal Greens

Mature Size: 0.2m x 2.0m

Australia's version of English Spinach, best grown in moist, rich but well-draining loam. May die back during winter but re-grow once the warm weather returns. In cold areas treat as an annual. Should be blanched or cooked before eating and can be enjoyed in soups, stews or stir fries.



Carpobrotus virescens | Coastal Pigface

Mature Size: 0.2m x 3.0m

A colourful and hardy creeping ground cover with very thick, succulent leaves which can grow to 10cm in length. The succulent leaves of the plant can also be eaten raw or cooked, or use the fleshy pulp as an ointment similar to Aloe Vera.



Cymbopogon ambiguus | Native Lemongrass

Mature Size: 1.0m x 1.0m

An aromatic grass traditionally used by the Aboriginal people to treat flu symptoms, chest infections and skin sores. The stalks and leaves may be used in tea or as a fragrant flavouring ingredient in soups, curries, sauces and marinades.





Citrus australasica | Finger Lime

Mature Size: 6.0m x 3.0m

Often described as 'lime caviar' for its small bead-like crystals of tangy juice. It is a good idea to protect trees from prevailing winds as the fruit can be damaged by the plant's thorns. Finger limes make good hedges and espalier well against fences and walls.



Austromyrtus dulcis | Midyim berry

Mature Size: 1.0m x 1.5m

The Midyim Berry is similar in taste to the blueberry and is among the most delicious of the bush tucker plants. Will thrive in full sun or part shade and is relatively free from pests and diseases. The sweet and tangy fruit can be eaten fresh or used in sweets or preserves.



Microseris lanceolata | Yam daisy

Mature Size: 0.3m x 0.3m

Once a staple food of the Aboriginal people. Produces gangly, white tuberous roots that taste sweet and slightly coconutty. May be eaten raw, baked, and included in salads. Leaves are also edible.



Image By Tucker Bush



Plectranthus graveolens | Bush Basil

Mature Size: 1.5m x 2.0m

Traditionally used as a medicinal and ceremonial herb. The strongly aromatic leaves can be scattered fresh on pizza or included in salads. Will grow best in full sun or part shade in freely draining soil.



Image By Tucker Bush



Alpinia caerulea | Native Ginger

Mature Size: 2.0m x 1.0m

Suitable for part or full shade, Native Ginger produces fragrant white flowers in late spring followed by bright blue berries that can be picked and eaten straight off the stem. Like other ginger roots, the rhizome can be cooked in a variety of dishes.



Image By Tucker Bush



Backhousia citriodora | Lemon Myrtle

Mature Size: 3.0m x 3.0m

This popular native herb boasts an intense, fresh and tangy flavour. Freshly plucked leaves may be used in teas, syrups, glazes, cakes, biscuits, dressings, sauces, ice creams, dips and meat dishes. Essential oil from the leaves has antifungal and antibacterial properties.



Mentha satereioides | Bush Mint

Mature Size: 0.2m x 0.4m

Bush Mint has traditionally been used to relieve cold & flu symptoms, insect repellent, and in homemade scrubs and lotions. Grows best in shaded areas. Pluck fresh leaves and use in salads, sauces, sorbet, or as a tea.



Image By Tucker Bush



Hibiscus sabdariffa | Rosella

Mature Size: 2.0m x 1.0m

Rosella is a hardy plant that produces red edible calyxes after flowering. Has a sweet flavour that goes well in salads, jellies, red sauces, jams, cordials, syrups, fruit teas and wine. Commonly preserved in syrup and added to cocktails.





Syzygium australe | 'Bush Christmas' Lilly Pilly

Mature Size: 5.0m x 3.0m

A mid-sized, dense shrub with glossy green leaves and white powder-puff flowers followed by pleasantly sour fruit that can be eaten fresh or made into jams, sauces and jellies. A great feature plant, for screening and windbreaks.



Prostanthera incisa | Native Thyme

Mature Size: 2.0m x 1.0m

This highly aromatic shrub is commonly used in cooking and herbal teas. Both stem and leaf can be used, just pluck fresh from the growing plant. Plant in freely draining soil and water generously in summer.



Image By Tucker Bush



Dianella revoluta | Blueberry Lily

Mature Size: 1.0m x 0.5m

A hardy evergreen plant with firm, strappy leaves. Produces sweet, purple-blue berries that can be enjoyed fresh or used in sweet or savoury cooking. Suitable for a range of conditions and is generally free of from pests and diseases.



Image By Tucker Bush



Tecticornia lepidosperma | WA Samphire

Mature Size: 0.5m x 1.0m






This delicious salty treat can be eaten raw, sautéed or quickly blanched and tossed with olive oil and lemon. Thrives in full sun or part shade in sandy, free-draining soil.








Image By Tucker Bush

Recommended Plant List

Large Shrubs and Trees (greater than 1.5m tall)

-  Waterwise
-  Full sun
-  Part sun
-  Full shade
-  Insect attracting

-  Bird attracting
-  Balconies
-  Interior spaces
-  Shop fronts
-  Leftover spaces



Cycas revoluta | **Sago Palm**

Mature Size: 7.0m x 1.0m

These ancient plants look great as a standalone architectural feature in a pot as part of a minimalist garden arrangement. They are low maintenance and thrive in a sunny spot. Slow growing.



Bambusa gracilis | **Bamboo**

Mature Size: 8.0m x 1.0m

This non-invasive bamboo is currently very popular as it is fast growing, drought tolerant, low maintenance and great for screening.



Ficus lyrata | **Fiddle-Leaf Fig**

Mature Size: 2.0m x 1.0m

This increasingly popular architectural plant with bold, large leaves. It is very hardy and can thrive in low light conditions when planted indoors. Toxic to pets.





Raphiolepis indica | Indian Hawthorn

Mature Size: 3.0m x 1.5m

This robust shrub makes a great dense hedge with white/pink flowers and blue/black inedible berries. A slow growing plant that is also drought tolerant.



Howea forsteriana | Kentia Palm

Mature Size: 6.0m x 2.0m

This palm is also a favourite for indoor décor. It is pretty tolerant of neglect and can handle low sunlight exposure, air conditioning and central heating. Make sure that your soil's drainage is effective to avoid root rot.



Viburnum tinus | Laurestine

Mature Size: 4.0m x 2.0m

This tough, ornamental, evergreen shrub is excellent for hedging and screening. It produces white/pink flowers and has dark green leathery leaves.



Beaucarnea recurvata | Ponytail palm

Mature Size: 7.0m x 4.0m

The common characteristics of this plant includes a bulbous trunk, which is used to store water, and its long, hair-like leaves that grow from the top of the trunk like a ponytail.



Pests and Diseases

Pests and diseases are a reality of every urban garden or indoor plant display, however good management can help to control outbreaks and simplify the treatment process. The following table provides solutions to the control of common pest problems.



Aphids

Identify: Small insect approx 1-2mm long.

Control: Control weeds. Encourage predator insects such as ladybirds, hoverflies and wasps to attack aphids by not using pesticides. Ants discourage these predator insects, therefore ant control must be considered part of aphid control.



Fruit fly

Identify: Approx 6-8mm in length. Often found in fruit tree foliage. Larvae infest fruit.

Control: Remove infected fruit from the ground and tree and dispose. Traps can be made from plastic drink bottles with a lure inside. Allow three traps per tree. An organic bait containing spinosad is also available.



Scale

Identify: Approx 1-5mm long, found on plant branches and leaves adjacent the veins.

Control: Rub scales carefully off by hand. Spray with organic horticultural oil as directed



Slugs, snails and slaters

Identify: Snails and slugs leave a trail of slime. Slaters are often found under leaf matter or under items such as pots.

Control: Remove hiding places. Bait with a pellet made from naturally occurring Iron EDTA complex and not harmful to the soil, insects or other animals. Do not put pellets in heaps.



Two spotted spider mite

Identify: Small spider-like insect, adult mites approx. 0.5mm long.

Control: Destroy leaves or plants promptly, and control weeds. Natural enemies include tiny ladybirds, lacewing larvae, and predaceous thrips. They are killed by some chemicals used in the control of diseases or pests such as caterpillars or aphids.



Powdery mildew

Identify: White powder on foliage.

Control: The white powder is associated with poor air circulation and weakens a plant. Avoid crowding plants to ensure air flows easily between. It is best to remove the affected leaves/stem before it spreads. Also make sure you water the soil not the plant.



Leaf spot

Identify: Spots develop on foliage.

Control: The majority of leaf spot is caused by fungi, but some are caused by bacteria. Avoid overhead watering and remove affected leaves. If the infection is severe, a fungicide spray may be a last resort.

Further Information

Your local retail nursery will have qualified horticulturists that can provide advice on specific plant species. They are a wealth of information and using the tips and advice gleaned from this planting guide you will be able to discuss your particular needs.

There are many books available from your local library or bookshop which will give specific advice on planting and plant care for the Perth environment.

There are also many on-line resources which may assist with plant arrangement and design ideas.

Potted plants on small residential balcony



This publication is available in
alternative formats upon request.



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