



Sydney Landscape Code

Volume 1: Single Dwellings



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Introduction

PART A



A1 OVERVIEW

The City of Sydney Landscape Code (the code) guides the creation of high quality, sustainable landscape spaces within private developments. The code is divided into two volumes. Volume 1 of the code applies to single dwelling development. Volume 2 of the code applies to all other development excluding single dwellings.

Volume 1 of the code specifies council requirements for landscape elements that must be addressed in development application submissions for single dwelling developments. It also provides best practice guidance for each type of landscape space.

Volume 1 of the code refers to a number of housing types including detached single dwellings, terraces and semi detached dwellings. In the Sydney Local Government Area (LGA) these are typically characterised by relatively narrow frontages with limited outdoor gardens and courtyard spaces. Successful residential landscapes respond to and enhance the building's context, architectural style, scale, unique landscape qualities and the needs of residents. This document aims to help private land owners plan and design functional, efficient and environmentally responsive gardens.

By addressing the requirements and guidance outlined in this document you will assist council officers in reviewing your development application. This will make the process faster and more streamlined.

A2 WHO SHOULD USE THIS CODE

This code should be used by anyone involved in applications relating to single dwellings, including private landowners, developers, architects, landscape architects and other designers. You are encouraged to reference this code as soon as possible in the design process. The City of Sydney (the City) council officers will use this document as a reference when assessing development applications.

A3 HOW TO USE THE CODE

This code is structured as follows:

Part A- Introduction provides general information for use of the code.

Part B- Landscape Requirements outlines the requirements that must be addressed if your proposal includes addition of new, or modifications to existing: trees; front fences; front yards; and green roofs/walls.

Part C- Landscape Guidance provides guidance for the site planning and design of each type of landscape space within your single dwelling. The function of each space and their relationship to the building is discussed, and suggestions are made for the design considerations to improve the quality of your landscape spaces.



Figure 1: Flow chart explaining how various users should read the code.

A4 LANDSCAPE CODE – DA CHECKLIST

The following information is required to be shown on a plan when submitting a development application for landscape works which include addition of new, or modifications to existing trees, front fences, front yards and green roofs/walls. The code provides guidance for how to best design each of these items.

1. Site survey (required for all developments)

2. Trees

- a. existing trees to be retained with a tree protection plan (if required- confirm with the council)
- b. existing trees to be removed
- c. an arboricultural impact assessment for any works impacting existing trees, where existing trees are located on, or adjacent to the development site, prepared by a qualified arborist (AQF Level 5) in accordance with the Australian Standard for the Protection of Trees on Development Sites (AS4970)
- d. proposed trees (show size, tree protection zone (TPZ), structural root zone (SRZ), deep soil provision and tree species).

3. Soil

- a. for each tree: the soil area, depth, volume and location in relation to any built structures
- b. the type (composition) of soil provided for proposed trees
- c. deep soil location and quantity
- d. details showing how all impermeable areas drain to a suitably sized garden bed or the stormwater system.

4. Details of front fences (if changes are proposed)

- a. style and materials in relation to the heritage and character of the area and of your home
- b. height in relation to neighbouring fences and the slope of the street.

5. Front Yard (if changes are proposed)

- a. details showing provision of a clear and direct path from the street to your front door
- b. location of items such as a letter box, bikes, bins and services meters, including how these are accessed from the street, and details of any screening as appropriate
- c. proposed planting that complements the heritage and character of the area and of your home

6. Details of green roofs and walls (if proposed)

- a plan, cross-section and details of the green roof or wall showing all relevant components including:
- a. detailed sections showing the proposed depth and type of soil, selected in response your planting requirements, and to the particular sun, wind and shade conditions of the roof or wall
 - b. clear demonstration that the green roof or wall can be safely accessed for installation and maintenance, and that maintenance requirements have been understood and integrated into the design
 - c. details showing the water consumption, options for harvesting rainwater for irrigation and systems for managing drainage and storm water runoff
 - d. structural certification for the complete system.

Landscape Requirements

PART B

The following information is required to be shown on a plan when submitting a development application for landscape works which include addition of new, or modifications to existing:

- trees
- front fences
- front yards
- green roofs/walls.

B1 TREES

TREES

The City's strategies and controls require trees to be planted on all properties.

The Greening Sydney Plan is a strategic document written to coordinate the projects and programs that focus on increasing tree canopy, landscape amenity and native habitats within the City. Urban greening ensures that our city remains livable and healthy despite growing population pressures. Landscape is one of the City's most important assets, both on public and private land. Integrating greenery into urban areas improves air and water quality, controls storm water runoff, maintains healthy soil, supports a healthy urban climate and minimises the urban heat island effect. Research also shows that biodiversity contributes significantly to human health and well being, and also to economic prosperity.

Privately owned land makes up 62% of the City of Sydney, but only contributes 42% of the City's urban tree canopy. Significant improvements to both urban canopy and greening of the city can be achieved through the provision of planting in private residential developments and through maintaining established landscape features. This can include retaining existing trees, new tree planting, maintaining deep soil, green roofs and green walls.

REQUIREMENTS

Retain existing trees and/or plant new trees of equivalent or appropriate size.

Ensure new trees are suitable for the scale and environmental conditions of your site and are fit for purpose.

Ensure proposed landscape or building works do not impact existing trees on or adjacent to the site.

Take one of the following actions (in order of priority):

- a. retain existing trees
- b. if trees must be removed, re-plant new trees of the same size
- c. if there are no existing trees, plant a new tree of a size that is appropriate to your garden

Considerations for tree planting include:

- Trees can provide useful shade and varied sunlight throughout the year.
- Medium to large backyards should incorporate tree planting. Select trees of an appropriate size for your garden. Large trees are only suited to generously sized yards, small trees are suited to small courtyards.
- Consider the use of deciduous trees for maximum solar access in winter months, and shady, dappled light in summer.
- In small courtyards, a deciduous tree over a permeable paved or decked area can form a usable outdoor space with high amenity.
- Locate trees away from buildings and boundaries. Consider the mature height and spread of the tree when positioning it in the landscape, accommodating future desired sunlight. Minimise the instance of branches overhanging fences and neighbouring buildings.
- Consider locating garden areas around non-deciduous trees to avoid tree roots lifting hard surfaces and turf failing due to high levels of shade.
- Ensure all site services (sewer, water etc.) are located and protected before trees are planted.



DOCUMENT REFERENCE:

Greening Sydney Plan 2012
City of Sydney Urban Forest Strategy
2013
City of Sydney Urban Ecology Strategic
Action Plan 2014

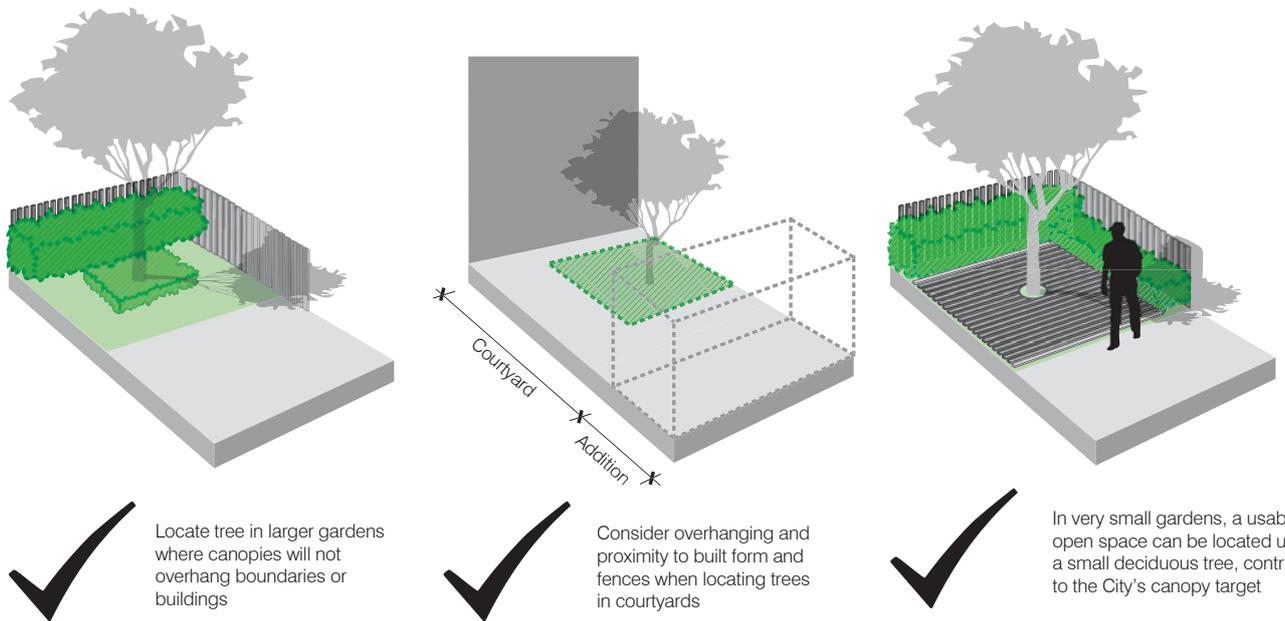


Figure 3: The relationship between your garden area and suggested planting types

Figure 4: Diagram showing how to use space beneath tree

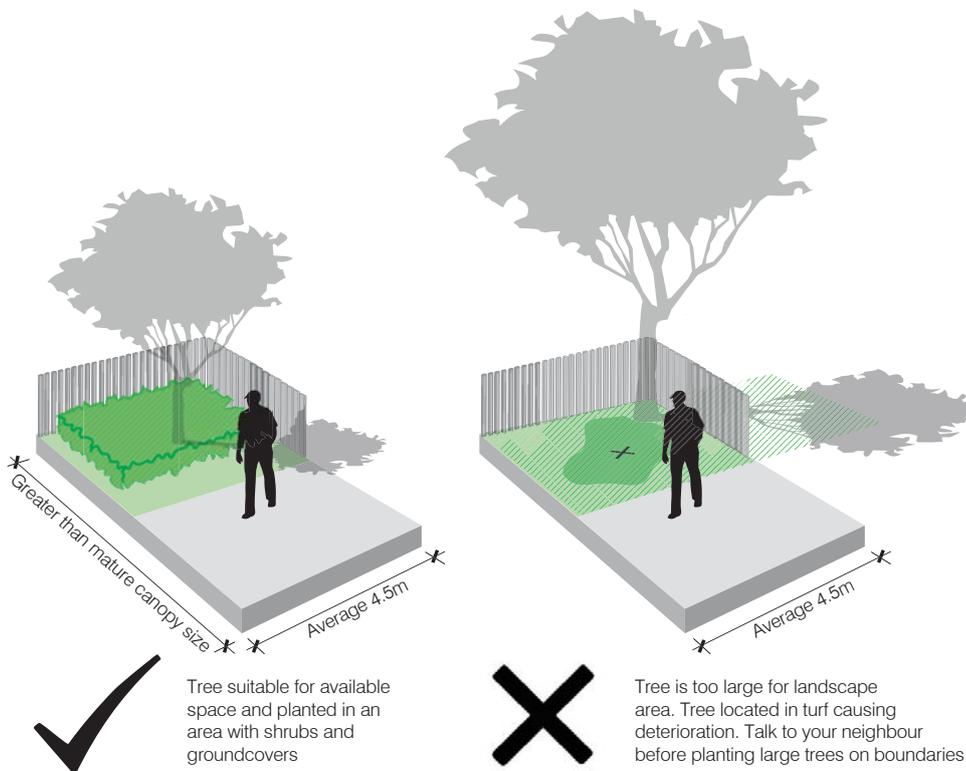


Figure 5: Scenarios indicating appropriate tree and mass planting in backyards



SOIL: DEPTH, VOLUME, QUALITY AND DRAINAGE

Soil comes in many different forms. Using a good quality, appropriate soil type and adequate depth, volume, and drainage will improve the viability of your planting. By carefully considering and using appropriate soil for each application, the success of landscape spaces and the visual quality of your development will be maximised.

REQUIREMENTS

- Where trees are proposed, ensure that the soil volume for each tree (measured in m^3) is at least 0.6 times the projected mature canopy area of the tree (measured in m^2) and that this soil is of suitable depth and is not located above or below any built structures.
- Provide soil for trees that is of high quality and is fit for purpose.
- Provide deep soil in accordance with the requirements of Sydney DCP 2012, and co-locate trees and deep soil wherever possible.
- Ensure all impermeable areas drain to a suitably sized garden bed or the stormwater system.

Soil:

- Soil should be of an appropriate depth, area and volume. Required soil volumes are dependent on the mature size of proposed trees. A large tree will require a greater volume of soil than a small tree. Ensure garden beds are the appropriate width for selected plant species.
- As a rule of thumb, the soil volume for trees should be approximately 0.6 x the projected canopy cover of the proposed tree (see figure 8).
- Select soil types that will sustain the range of plant types proposed in your garden. Ensure your chosen soil is appropriate for its intended use, i.e. light weight soil may be required for use on roof terraces.
- Ensure water can drain from your garden beds.
- Improve the quality of existing soil by adding organic matter (such as manure and / or composted green waste). This can help aerate the soil and increase its permeability. Organic matter is not recommended below 300mm from the surface.
- On roof terraces and balconies consider the various ways to achieve required soil depth including raised planters or pot plants.

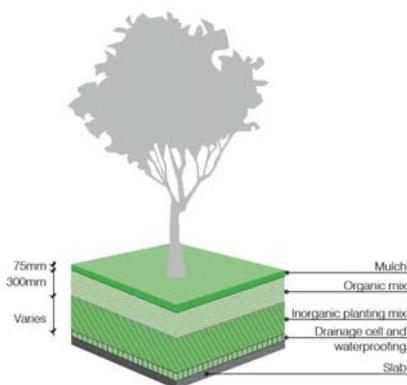


Figure 6: Soil profile detail for planting on structure

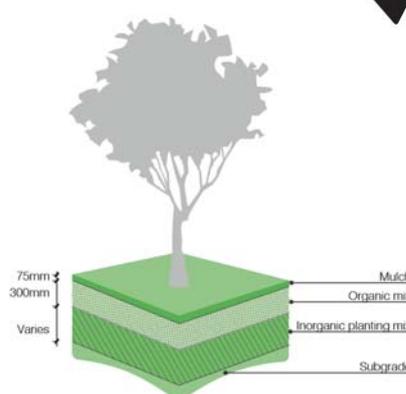


Figure 7: Soil profile detail for planting on natural ground

✓ Soil volume requirement:
0.6 x square metre of the projected mature canopy size of the tree

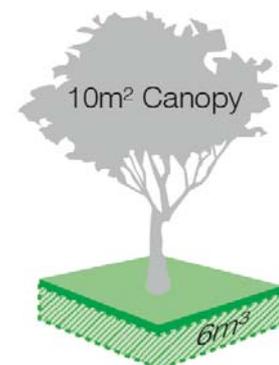


Figure 8: Example soil volume requirements for trees



DOCUMENT REFERENCE:

Sydney Development Control Plan 2012

B2 FRONT FENCES

Fences form the boundary of your property and are the interface between public and private space. Fence design should respond to the context of your building, the street and neighbouring properties. Along with the design of the front yard, the front fence can complement and enhance the appearance of your home. Fence design must comply with the City of Sydney DCP and other statutory requirements.

Front fence requirements apply to boundary fences in front of your home.

REQUIREMENTS

New front fences must be:

- a. complementary in style and materials to the heritage and character of the area and of your home
- b. a consistent height with neighbouring fences and if the street is steep, step with the slope
- c. robust, durable and of high quality materials and craftsmanship.

Considerations:

- Front fences can be used to help define the street edge and should be located along the boundary line to match neighbouring properties.
- Consider how different materials can allow for privacy and screening for your property while maintaining a clear line of sight between the private front yard and the footpath.
- Ensure that your proposal addresses the design of the front, side and rear fences of your development.



Image 1: Front fences are to be in keeping with the heritage nature of the area.



Image 2: Front fences are to be complementary in height and style to adjacent fences.

B3 FRONT YARD

Front yards are the public face of your home and can help improve the perception and overall appearance of your building. When designing front yards, ensure that you have considered how much space you have available, whether the ground slopes, the functional requirements of the yard, and how people can easily move within the space.

Where changes are proposed to an existing front yard, or a new front yard is proposed, demonstrate that it is designed to be both functional and beautiful, and to provide a suitable entry and arrival space for your home.

REQUIREMENTS

Front yards must:

- a. provide a clear and direct path from the street to your front door
- b. accommodate and allow access to items such as a letter box, bikes, bins and services meters (and include screening as appropriate)
- c. include planting that complements the heritage and character of the area and of your home.

Your site plan must show an arrow indicating the path from your bin storage area to the street collection point.

Consider:

- all the items that you will need to locate in the space, such as bins, bikes and other services
- how and when these items will need to be accessed
- avoiding clutter and exploring innovative, well considered methods for storage and screening
- any heritage items within your street or locale that should be responded to
- using planting for screening where space allows: consider the scale of trees and shrubs in your front yard especially along fence lines, and ensure your plants are an appropriate size for the space available.



Image 3: Front yards with clear access to the front door and vibrant planting addressing the street



Image 4: Front yard with visually attractive planting

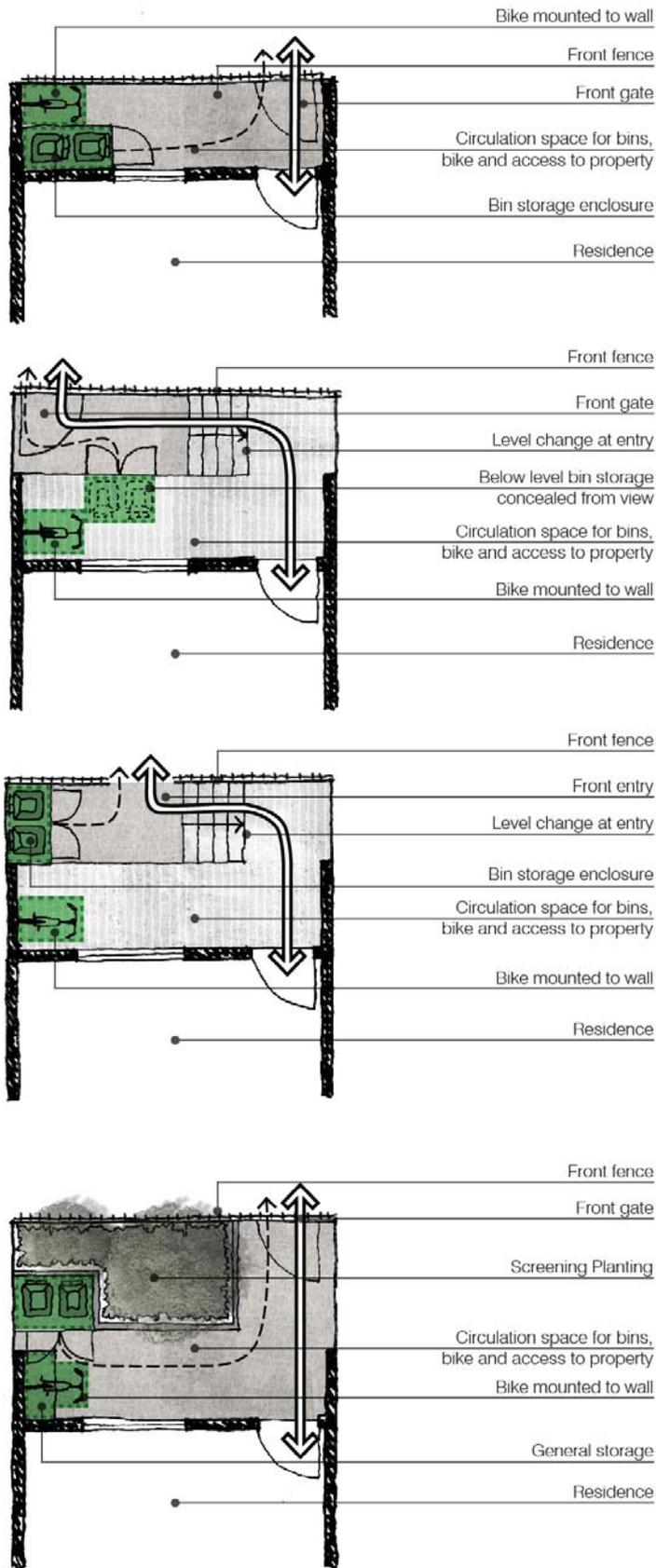


Figure 9: Example layout of front yard arrangements illustrating a variety of scenarios to store bins and bikes when rear lane access is not available

B4 GREEN ROOFS AND WALLS

Green roofs and walls are an efficient way to maximise space and extend your garden, whilst providing measurable environmental benefits.

When space is limited, green roofs and walls are an alternative way to create a garden and support urban ecology and habitats. They can also contribute to efficiently insulating buildings from heat and noise. There are a variety of green roof and wall types that should be considered when planning your development. You should choose the most appropriate system for your site. You must also select appropriate plant species and consider ongoing maintenance. The City's website provides further information on Green Roofs and Walls.

REQUIREMENTS

Green roof and wall designs should:

- a. provide the right depth and type of lightweight soil for your chosen plants, responding to the particular sun, wind and shade conditions of the roof or wall
- b. ensure safe and easy access for installation and maintenance, showing that maintenance requirements have been understood and integrated into the design
- c. minimise water consumption, investigate the potential to harvest rainwater for irrigation and adequately manage drainage and storm water runoff
- d. be structurally certified as a complete system.

RULES OF THUMB:

RECOMMENDED SOIL DEPTHS:

These are minimum soil depths recommended by the City of Sydney. Deeper soils may be required for different landscapes or types of vegetation.

Plant type	Minimum soil requirements
Grass and Ground covers	300-450mm
Food such as herbs, and greens	300-450mm
Shrubs	500-600mm
Trees	800-1200mm

GREEN ROOF WEIGHTS

This table provides a rough guide to the saturated weights of green roofs compared to other materials. It is a guide only and a qualified structural engineer can assess the design and weight of your particular green roof design.

Material	Depth	Approximate weight
Soil	100mm	120 kg/m ²
Soil	500mm	600 kg/m ²
Gravel	100mm	150 – 180 kg/m ²
Pavers	40-50mm	70 – 150 kg/m ²



DOCUMENT REFERENCE:

Greening Sydney Plan 2012
 City of Sydney Urban Forest Strategy 2013
 City of Sydney Urban Ecology Strategic Action Plan 2014
 City of Sydney Green Roofs and Walls Policy 2014



Image 5. Private Residence

Landscape Guidance

PART C

Part C provides guidance for the site planning and design of each type of landscape space within your single dwelling. The function of each space and their relationship to the dwelling is discussed, and suggestions are made for the provision of elements that should be considered to improve functionality.



Image 6: Private Residence

C1 BEST PRACTICE LANDSCAPE DESIGN

This list provides design guidance for landscape in single dwelling developments. This guidance does not form part of the DA Checklist, however it is recommended that applicants consider these items prior to lodging their DA.

Consider the following design guidance:

Site Planning and Design

- a. Outdoor areas should be well connected to the building's main living areas and designed with adequate room to move within and through each space.
- b. Design your backyard to be a usable, flexible space that enhances the livability of your property.
- c. Design internal courtyards to meet the visual and functional needs of your development, to provide safe and easy maintenance and to maximise sunlight.
- d. Design your new roof terrace or balcony to minimise overlooking of neighbours, respond to the functional needs of your development, be robust, provide adequate soil (type and depth) and provide safe and easy access for maintenance.

Landscape Design Elements

- e. Storage and services: Consider how storage can be integrated into your proposal in a tidy and thoughtful manner.
- f. Amenity items: Consider which items to include to make the best possible use of your outdoor space.
- g. Planting: Select plants that are suitable for your site conditions and for the local urban ecology. Plants with low water requirements are preferred.
- h. Material selection: Choose materials for your landscape spaces that are fit-for-purpose, robust and sustainable.
- i. Utilities: Consider how to provide appropriate and conveniently located utilities for your home.
- j. Maintenance: Ensure your landscape spaces are designed to be easily, regularly maintained.

C2 SITE PLANNING AND DESIGN

SITE PLANNING

Residential properties are often comprised of a number of different landscape spaces such as front yards, back yards, roof terraces, balconies, courtyards and lightwells. Landscape spaces offer opportunities to extend internal living areas, improve the amenity of the property and positively contribute to the overall appearance of the home.

GUIDANCE

Outdoor areas should be well connected to the building's main living areas and designed with adequate room to move within and through each space.

The landscape design should create thoughtful spaces that are:

- comfortable for people
- integrated and connected to the building as an extension of internal living spaces
- functional, providing for a range of activities that meet the needs of residents.

Considerations:

- Consider how you are likely to use outdoor spaces and ensure that the design facilitates these activities.
- Create multi-functional spaces that allow for every-day uses such as drying laundry, as well as recreation, outdoor entertainment and play.
- Optimise direct sunlight to landscape spaces, ideally several hours of direct sunlight each day during winter months.
- Ensure courtyards are designed to drain water away from the building towards a stormwater drain or soft garden areas.
- Collect and store rainwater in tanks where possible. This water may be used within your property for irrigation or toilet flushing.
- Provide clear, unobstructed access to front and back doors.
- Ensure the landscape design incorporates functional needs, such as access to bins and drying areas.
- Ensure paths are a sufficient width to allow ease of movement. Ensure that bins and bikes can fit along paths.
- If you will be using your courtyard for car parking, ensure that access and circulation around the vehicle is sufficient. Ensure that you can safely manoeuvre the vehicle in and out and that there is enough space to move items such as bins around the car once it is parked.

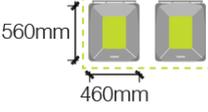
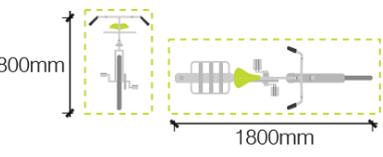
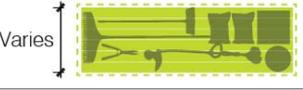
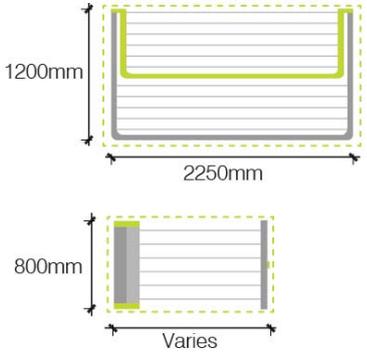
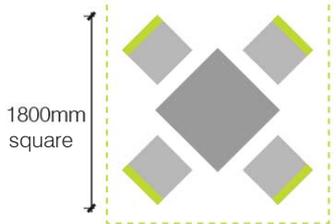
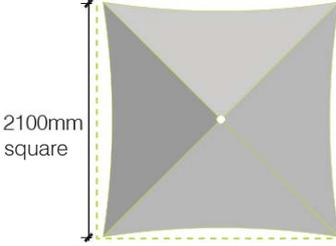
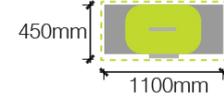
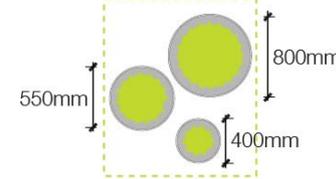
CONSIDERATIONS FOR ITEMS WITHIN LANDSCAPE SPACES

When designing landscape spaces, ensure that you have considered functional elements that you will require. Think about the space these items will physically occupy and any circulation that will be required around them. A typical property might have 30m² of outdoor living space and require over 10m² of items.

When arranging items, consider their relationship with one another; in some cases grouping items will help improve access and convenience, in other instances, consolidating items will make them difficult to access.

It is important to plan for storage of garbage bins on your site. It is council policy that garbage bins be stored on private property and not on the street.

Common landscape elements and their approximate sizes are listed below:

Storage		
Bins 	0.8m ²	
Services (e.g. gas/water meter) Typically 400mm H 400mm W 	Varies	
Bikes 	1.3m ²	
General Storage 	Varies	
Utilities		
Washing Line 	2.7m ²	
Letter Box Typically 470mm H 200mm W 	Varies	
Rainwater Tank Typically 2000mm H 1800mm W 	Varies	
Amenity		
Tables and Chairs 	3.3m ²	
Shade and Weather Protection 	5m ²	
BBQ 	0.7m ²	
Pot Plants 	2m ²	
Compost 	0.5m ²	
Worm Farm 	0.25m ²	

BACKYARD

Backyards should respond directly to the needs, requirements and aesthetic taste of the owner. Backyards offer opportunities for planting, storage, recreation, outdoor living and wildlife habitat.

GUIDANCE

Design your backyard to be a usable, flexible space that enhances the livability of your property.

Backyards should:

- be functional, providing appropriate facilities to support and enhance daily life
- be an attractive space that is well designed and comfortable
- maximise use of water-permeable ground materials
- be flexible, providing a variety of interesting spaces for residents to use
- be integrated and connected to living spaces
- generally include a medium-large tree
- respond to the local environment to support wildlife habitat and ecology.

Considerations:

- Consider a range of uses for your backyard. Depending on their size, backyards can be used for gathering, recreation, clothes drying, storage and so on. Consider providing areas of hard paved surfaces, lawn and planting to facilitate a range of activities.
- Ensure that you have considered the space that is available and the items such as furniture, storage, steps, clotheslines and so on that you need to include within it. Carefully locating these items will help improve the comfort and success of your garden.
- Consider the way your backyard can be accessed, for example whether there is a back or side lane and if there is direct access to the inside living space. Ensure the design of your space responds to any access requirements.
- Design backyards as extensions of internal living spaces to enhance the liveability of your house.
- Where rear lane access exists, consider whether you can, or want to, provide car parking within your backyard. This can improve the access to your car, but may also negatively impact on your outdoor living space.



Image 7: Backyard with a variety of planting



Image 8: Backyard as extensions of living spaces

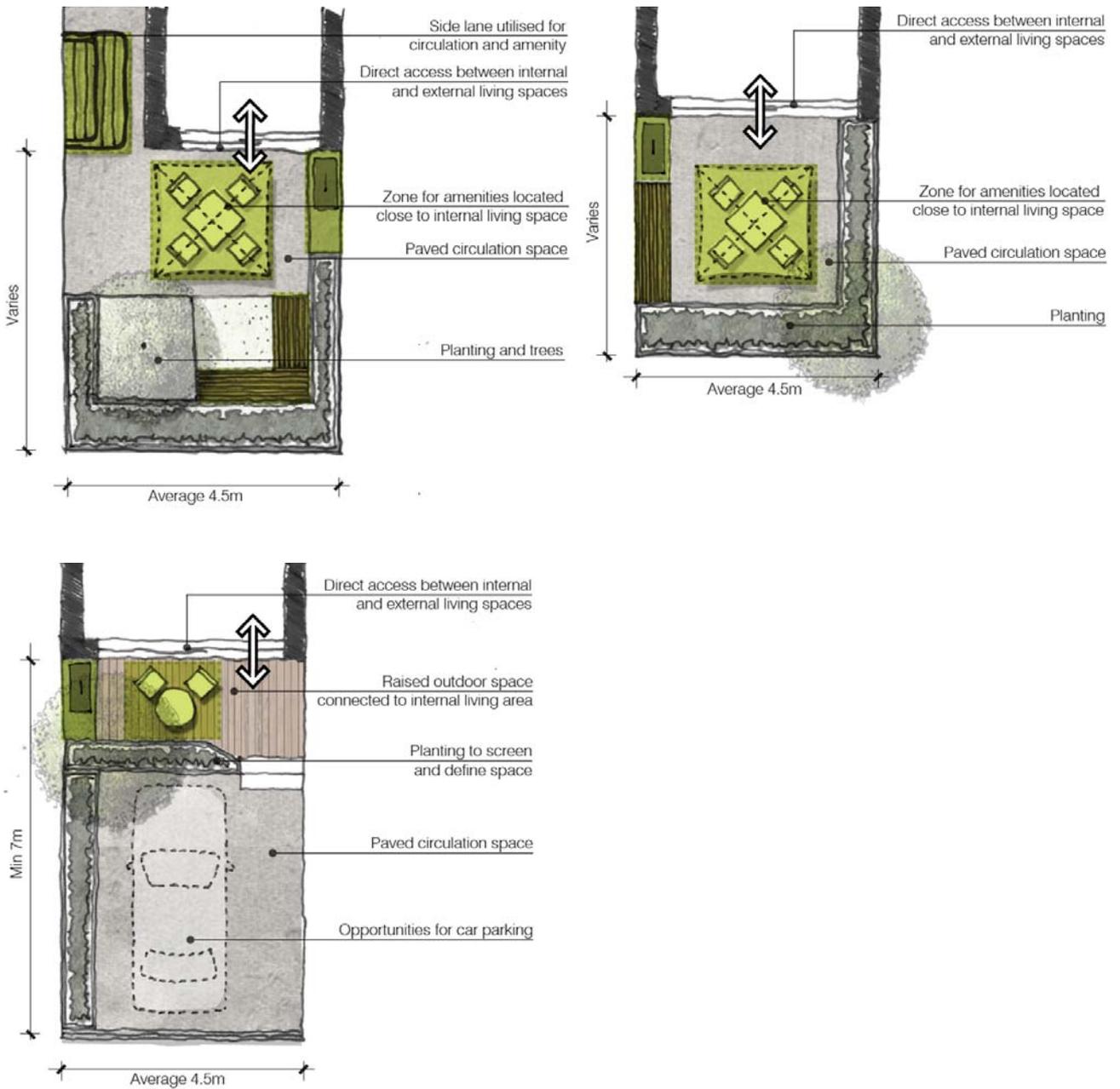


Figure 10: Example layouts of backyards illustrating a variety of spatial arrangements and consideration for placement of elements

INTERNAL COURTYARDS AND LIGHTWELLS

Internal courtyards and lightwells can increase the usable space of your home, improve the natural light to the internal rooms and allow more space for planting. The arrangement and size of internal courtyards will depend on the design of the building but wherever possible, they should be oriented to maximise sunlight to internal rooms. When designing internal courtyards or lightwells, consider how the space will be accessed and from what part of the building.

GUIDANCE

Design internal courtyards to meet the visual and functional needs of your property, to provide safe and easy maintenance and to maximise sunlight.

Internal courtyards should be:

- functional
- integrated and connected to living spaces
- located to maximise natural daylight to internal rooms.

Considerations:

- Consider how your internal courtyard will be used. The requirements of a narrow lightwell to a bathroom, bedroom or kitchen will be different to a more usable internal courtyard located off a living area.
- Use durable and robust materials for internal courtyards. These spaces are often dark and poorly ventilated and may need to be resistant to damp and mould.
- Ensure you have addressed any concerns relating to privacy, noise, overlooking and screening.
- Provide adequate drainage.
- Choose planting that will thrive with the level of sunlight in the space.



Image 9: Internal courtyards can provide additional outdoor living space.

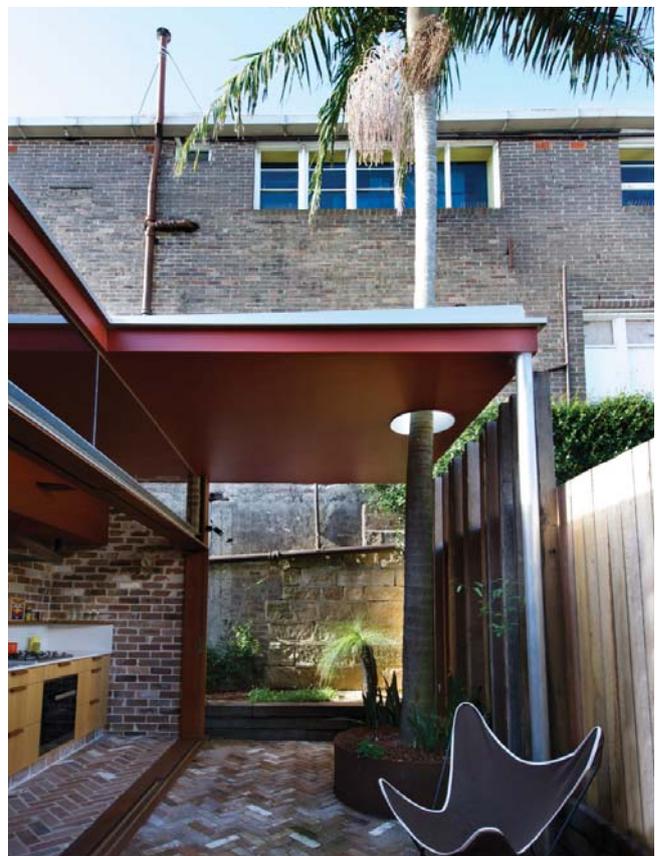


Image 10: An internal courtyard can function as an extension of the living space.

ROOF TERRACES AND BALCONIES

Terraces, balconies and roof gardens offer additional open space for residents. The arrangement and size of roof terraces and balconies will depend on the space and access available and privacy considerations to neighbouring properties.

When designing roof terraces and balconies consider how the space will be accessed and from what part of the building.

GUIDANCE

Design your new roof terrace or balcony to minimise overlooking of neighbours, respond to the functional needs of your development, be robust, provide adequate soil (type and depth) and provide safe and easy access for maintenance.

Roof terraces and balconies should be:

- functional, allowing a generous space for residents
- integrated with the building and connected to living spaces
- screened from the public domain, whilst providing some opportunity for casual surveillance of the street.

Considerations:

- Ensure you have addressed any concerns relating to overlooking and screening.
- Refer to the City of Sydney Green Roofs and Walls Policy. This will provide suggestions for types of green roof systems that you can utilise in your development.
- Consider how your roof terrace will be used. The requirements of a balcony off a bedroom will be different to a terrace located off a living area.
- Ensure that your roof terrace or balcony has access to both sun and shade.
- Ensure adequate safety features are provided such as balustrades. Ensure all roof terraces and balconies comply with the Building Code of Australia, the Sydney Development Control Plan and any other relevant statutory controls.
- Utilise durable and robust materials on roof terraces and balconies. These spaces are often exposed to the elements and may require a high level of maintenance.



Image 11: Roof terraces can provide additional outdoor living space. Locate furniture and storage to suit the function of the space.



Image 12: A balcony can function as an extension of the living space.

C3 LANDSCAPE DESIGN ELEMENTS

STORAGE AND SERVICES

Items such as bins, gas and water meters and bicycles are a functional necessity of all houses. These items can take up a large amount of space and require clear access. Given the limited space in residential courtyards, they can often create visual clutter and significantly impact the appearance of your home. Screening or storing utilities can help improve both the look and function of your property. In the case of heritage items, a development application may be required for storage and services. Refer to the Sydney DCP 2012.

GUIDANCE

Consider how storage can be integrated into your proposal in a tidy and thoughtful manner.

Bin Storage:

- Locate storage for bins in an area that has easy and convenient access to the bin collection location on the street.
- Locate bins in spaces that will have the least visual impact on your property and are concealed from view from the street where possible.
- When storing bins, consider the space available and provide inbuilt storage or screening wherever possible.
- Where there is outdoor access from the street to the backyard, consider storing bins in the backyard. The backyard is often more generously sized and can be designed specifically to store these items out of sight.
- Alternatively consider storing bins to the side of your property. Ensure that side access isn't obstructed by bin storage.
- Never store bins on the footpath, lane or road. This is not permitted.

Compost:

- Composting food scraps can reduce your household waste by up to 50%. When locating compost bins, consider the space available and provide inbuilt storage or screening wherever possible.

Services:

- Locate services (gas, electrical and water meters etc.) thoughtfully to minimise the visual and physical impact on the property. Where possible, combine the location and storage of services to limit visual clutter.
- Service elements must be accessible to residents and service providers and meet all statutory regulations or controls relating to the placement of services.
- Create a usable, functional and pleasant environment by providing inbuilt storage or screening devices around services.

Bike Storage:

- Ensure that your bike can be secured or locked. To minimise opportunities for theft, store your bike out of sight from public areas.
- Avoid reliance on locking bikes to window bars and fences. Consider installing a bike rack or hook to store bikes neatly. Consider screening or inbuilt storage where space allows.
- Ensure that access to other utilities i.e. bins and energy meters remains clear whilst your bike is stored.
- Consider access to paths and entries when locating bike storage.

General Storage:

- Provide additional storage in convenient locations for items such as gardening equipment, hoses, shoes, sport equipment and pet items.
- Where possible, amalgamate storage facilities to limit visual clutter.
- Design screening and storage using materials used elsewhere in the landscape to give your garden a consistent look and feel.

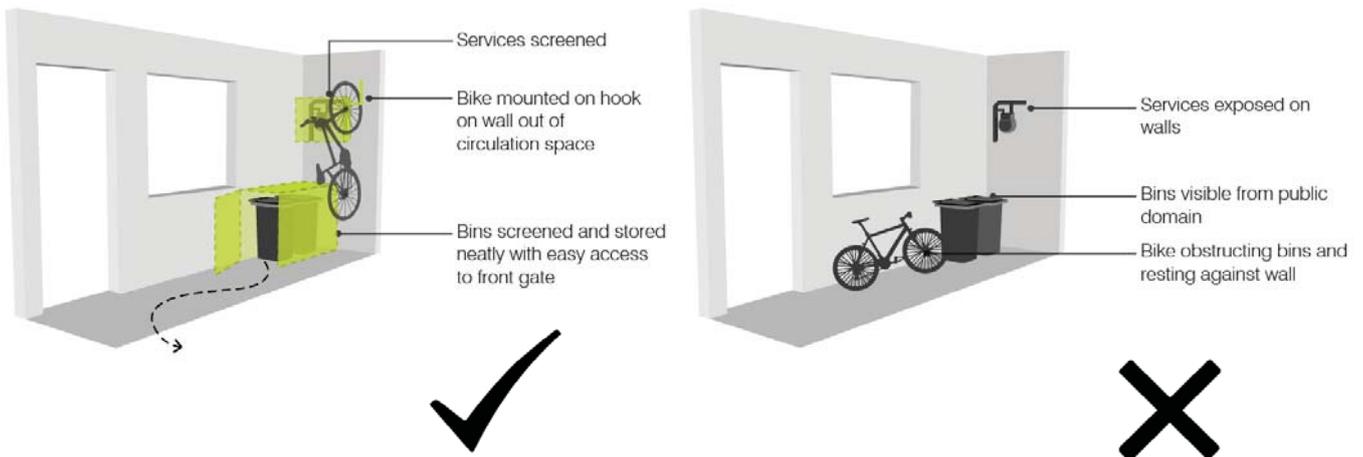


Figure 11: Example storage and screening options for items in the front yard

AMENITY ITEMS

Amenity items are elements or features within a landscape that contribute to the physical comfort of a space. Amenity items can increase the value of a landscape and make spaces more attractive, convenient and functional for users. Items might include, but are not limited to: tables and chairs, BBQs, shade structures, weather protection and pot plants.

GUIDANCE

Consider which items to include to make the best possible use of your outdoor space.

Tables and chairs:

- Consider including tables and chairs in courtyard spaces to provide opportunities for outdoor entertaining.
- Consider the area required for tables and chairs to fit comfortably and ensure that you have provided adequate room to move around them.
- Consider options for inbuilt seating which is a great way to save space and improve the appearance of your garden. Inbuilt seats can also offer opportunities for storage.
- Consider durability when selecting furniture. Timber furniture may require maintenance to retain a high quality finish.

Shade and weather protection:

- Consider how natural and built elements will create a different quality of shade. Trees will result in dappled light where a fixed shade structure will provide consistent shade and shelter. Shade provision can make outdoor spaces more comfortable and usable all year round.
- Consider where removable shade and weather protection may be appropriate. Umbrellas that can be removed will provide protection when necessary for enjoyment and sunlight to planting at other times.



Image 13: Tables and chairs provide amenity for your courtyard.

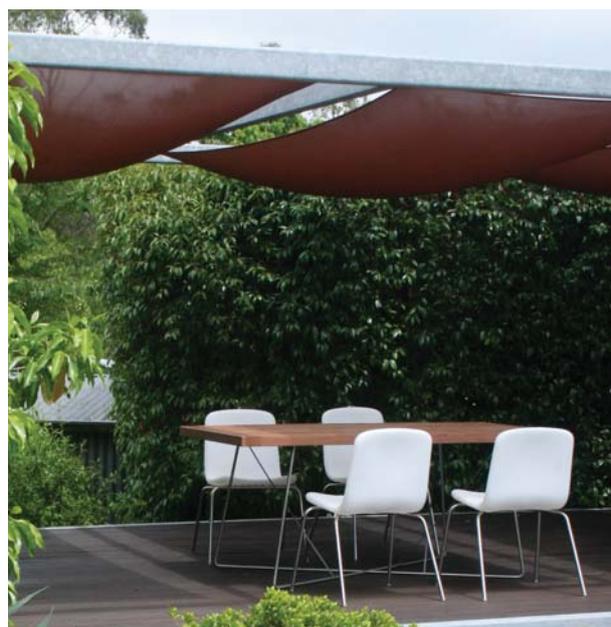


Image 14: Shade protection over courtyard area

BBQs:

- BBQs can provide opportunities for outdoor entertaining.
- Consider building a BBQ in to the overall design of your courtyard. Locating a BBQ near outdoor dining areas can improve convenience and efficiency of your backyard. Consider installing a gas bayonet to connect your BBQ.

Pot Plants:

- Pot plants can be used in areas where soil depth is otherwise not available, such as on roof terraces or balconies.
- Using various pot sizes will allow you to plant a variety of species. Ensure that you allow for adequate soil depth and volume for the plant you choose in each pot.
- Utilising pot plants will allow you to easily change the types of plants in your garden. This will result in flexibility and variation in the landscape.
- Consider the size and weight of pots once planted. Large pots will be harder to move when filled with soil and plants. If located on a balcony, ensure it is designed to withstand the weight of the pots.
- Pots can be used as a flexible way to create separate spaces within a larger area.



Image 15: Inbuilt BBQ area provides convenience and saves space.



Image 16: Pot plants allow personalisation and can be easily moved and changed.

PLANTING

Planting can improve the visual appearance and quality of your home. A well considered selection of plants can also help meet the City of Sydney's targets for tree canopy cover, biodiversity and sustainability, and contribute to local habitat networks.

Planting can be used to define and create spaces, screen, soften buildings, increase permeable surfaces and create an interesting view.

If you are uncertain what plants are appropriate for your garden you can speak to your local nursery or garden centre. You can also visit the Sydney Water plant selector for tips on low water use and species local to your area.

GUIDANCE

Select plants that are suitable for your site conditions and for the local urban ecology. Plants with low water requirements are preferred.

Considerations for planting include:

Planting generally:

- Consider the vegetation and environment in your local neighbourhood, and how your garden can contribute to the biodiversity, habitat and microclimate of the area.
- If you live in an area with a particularly sensitive environment, such as adjacent to waterways or parks, check the local weed lists before planting to ensure your selection is appropriate.

Trees:

- Refer to Part B of this code.

Shrubs:

- Use native, endemic and low water use species where possible.
- Consider how various plants can affect the experience of a garden in terms of height, texture, scent, colour and so on. Plants can be used to form dividing walls, add seasonal colour and create a focal point.

Lawn and ground covers:

- Lawn can create space for activity within your garden, and increase water infiltration within your property. The size of lawn areas will determine how it can be used.
- Ensure you have selected appropriate lawn and ground cover species for your garden i.e. adequate sunlight is required as lawn is not likely to grow in areas of shade or under large trees.
- Consider maintenance requirements such as regular lawn mowing. Consider the need for a lawn mower and its storage.



DOCUMENT REFERENCE:

Greening Sydney Plan 2012
City of Sydney Urban Forest Strategy
2013
City of Sydney Urban Ecology Strategic
Action Plan 2014

MATERIALS AND FINISHES

The materials and finishes you use within your landscape can greatly assist the usability, function, durability and appearance of a home. The 'finish' of an item describes its final surface treatment, e.g. paint, render, varnish, stain and so on.

By selecting appropriate materials you can improve the appearance of your property, promote a safe environment and minimise the need for on-going maintenance.

GUIDANCE

Choose materials for your landscape spaces that are fit-for-purpose, robust and sustainable.

Considerations:

- Use sustainable materials within the landscape design. Consider where the material comes from, its manufacturing process and durability.
- Consider the intended use and activity of a space and ensure materials are durable and suitable for their location (appropriately sized, will withstand wear and tear and are structurally suitable).
- Consider location and sunlight when choosing materials. Dark colours will soak up more heat and make your space hot in summer, light colours can create glare and mark easily.
- Consider the texture of materials when designing spaces. Smoother textures may be appropriate for spaces where people will gather. Gravel paths might be more appropriate for side access ways or drying areas.
- Ensure materials are selected to complement each other as well as the landscape and building.
- Ensure products are easily obtained when replacement is required.
- Consider the intended lifespan of products. Materials such as timber may require on-going maintenance to retain a high quality finish.

UTILITIES

Utilities found in residential landscapes include practical and functional items such as letterboxes and washing lines. Carefully locating them can improve the function and appearance of your home.

GUIDANCE

Consider how and where to provide appropriate and conveniently located utilities for your home.

Washing Lines:

- Locate washing lines in an area that will receive adequate sunlight (preferably in a north west facing location), be exposed to breezes and be out of sight from primary living spaces (both inside and outside).
- Washing lines should be conveniently located to limit the distance from your washing machine to the line.
- Consider the type of washing line appropriate for the space available. A rotary line will take up a large amount of space, whereas a folding frame or retractable line can be discreetly stored when not in use.

Letter Boxes:

- Letterboxes should be located at the front of your property next to the entry gate, and have a secure lock. Ensure letterboxes and locks meet Australia Post standards.
- Letterboxes should clearly display your house number.
- Letterboxes can be integrated into your front fence to minimise visual clutter.

MAINTENANCE

All landscapes require some maintenance to be successful. Maintenance of your garden can help ensure your plants and furniture/utilities are long-living and sustainable, and can help maintain the appearance of your property.

GUIDANCE

Ensure your landscape spaces are designed to be easily, regularly maintained.

For effective maintenance:

- Ensure that you understand the maintenance requirements of your garden before it is built, to ensure the design is appropriate for you as a resident and caretaker. The less maintenance that is required, the greater the chance of regular, ongoing care of your garden.
- Ensure that all spaces are easily accessed and can be maintained from your property or the footpath.
- Consider how your property will look from the street. Front yards may require the most maintenance to improve the public appearance of your property.
- Ensure landscape elements such as plants do not encroach on the public domain.
- Consider how roof terraces and / or balconies will be safely accessed, without requiring specialist safety equipment.
- Provide adequate storage for tools and gardening equipment.
- Provide enough connections to water, power and drainage in each space.
- Choose the right plants. Careful plant selection can help minimise maintenance and watering. Installation of a low water use irrigation system on a timer where possible is recommended.
- In areas with poor accessibility, robust, durable and low maintenance plants and materials should be used.

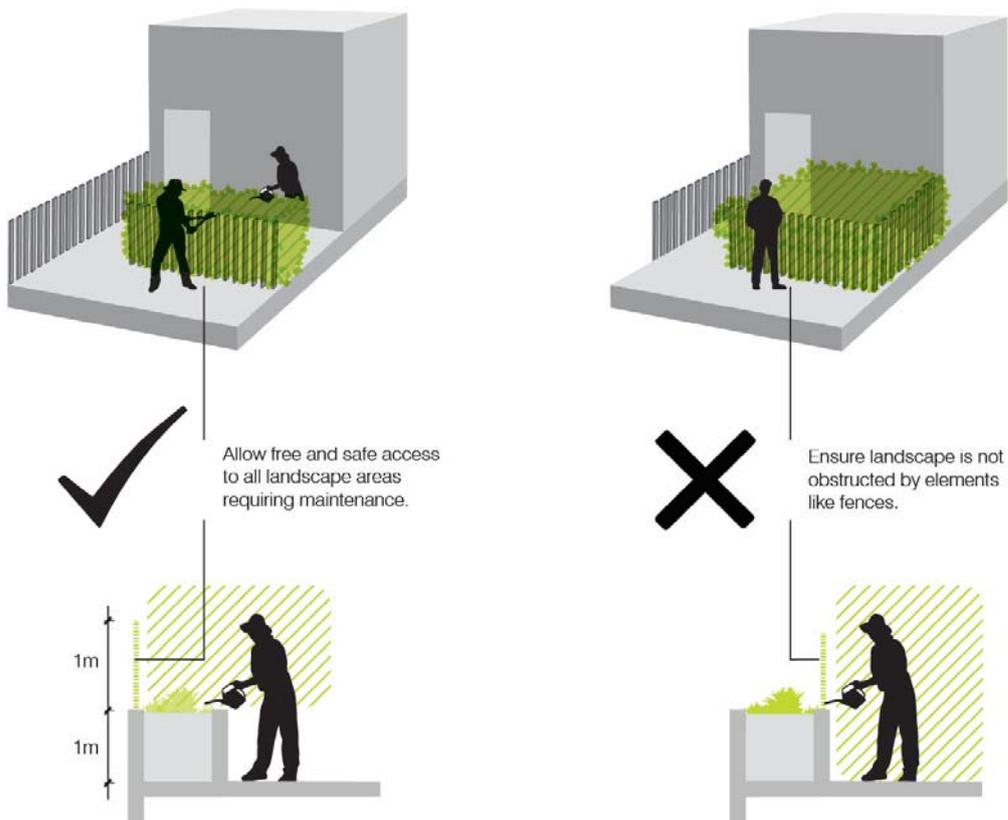


Figure 12: Description of acceptable landscape configurations to allow easy and safe maintenance

Glossary

PART D

PART D

Glossary of Terms

Amenity the 'livability' or quality of a place which makes it pleasant and agreeable for people. Amenity is important in both the public and private domain and includes the enjoyment of sunlight, views, privacy and quiet (NSW Multi-Unit Residential Design Code 2002).

Arborist refers to a qualified and experienced practitioner with a minimum AQF 5 (refer to Arboriculture Australia website).

AS 1158 Australian Standard 1158: Lighting for Roads and Pedestrian Spaces Series.

AS 1428 Australian Standard 1428: Design for Access and Mobility Series.

Australian Standards can be accessed at any City of Sydney library. Just ask the Librarian and they will show you how.

BCA means Building Code of Australia.

Building line the line formed by the main external face of the building, excluding any balcony or bay window projections (NSW Multi-Unit Residential Design Code 2002).

Common open space also known as **communal open space** is a usable community open space for the recreation and relaxation of residents which is under the control of a body corporate.

SDCP means Sydney Development Control Plan 2012.

Deep soil is an area of natural ground with a relatively natural soil profile. It excludes areas where there is a structure underneath or above, as well as pools and non-permeable paved areas. However, it can include areas of porous paving and essential accessible paths, up to 1.2m wide, providing there is deep soil area to one side that is level with the footpath or paving.

Green roof means a roof system designed to promote the growth of various forms of vegetation on the top of buildings. Differing from a roof garden, a green roof can also support various forms of renewable energy and water collection technology to assist in supplying power and water to the occupants of the building.

Local species a plant species occurring at a place within its historically known natural range and forming part of the natural biological diversity of a place (NSW Multi-Unit Residential Design Code 2002).

LGA refers to Local Government Area.

Planting Design refers to the physical arrangement of plant species within a garden bed or site. Planting design means that the garden beds and plants within them are considered as whole elements.

Private open space refers to an open area of land or building attached to a building intended for the exclusive use of occupants of the building for private outdoor living activities.

Public domain refers to areas of the City in which access to and use of is available for any member of the public. Public domain typically includes parks, plazas, footpaths and streets. Public domain elements of the City are typically controlled by the City of Sydney.

Setback Setbacks are the distance which a building is offset from the boundary

Sight line is a line extending from an observer's eye to a viewed object.

Site planning is the process of arranging built and unbuilt elements on a site to accommodate a chosen function, program and design outcome.

Soft Landscape refers to planted or grassed areas with a permeable finished ground surface.

Sustainable Source refers to forestry products that are environmentally appropriate, socially beneficial and economically viable. “Environmentally appropriate forest management ensures that the harvest of timber and non-timber products maintains the forest’s biodiversity, productivity and ecological processes.” (Forestry Stewardship Council)

SLEP means Sydney Local Environmental Plan 2012.

Urban canopy refers to all trees located throughout the local government area.

Urban ecology (or biodiversity) refers to living things that inhabit urban areas and the ecosystems they form.

Urban island heat effect is an urban area having higher average temperature than its rural surroundings owing to the greater absorption, retention, and generation of heat by its buildings, pavements, and human activities.

Water Sensitive Urban Design means the integration of urban planning with the management, protection and conservation of the urban water cycle so as to ensure urban water management is sensitive to natural hydrological and ecological processes. It may include practices such as storm water reuse, use of bio-retention swales and detention ponds.

Wayfinding a term used to describe the ease of navigating through a landscape with the aim of reaching a pre-selected destination.

WSUD means Water Sensitive Urban Design.

References

PART E

PART E



Image 17: Private Residence

References

- Cover Image: Bates Landscape. Photography by Jason Busch.
- Image 1: Photo by OCULUS 08.07.14
- Image 2: Photo by OCULUS 08.07.14
- Image 3: Photo by OCULUS 29.08.14
- Image 4: Photo by Jessica Hodge for OCULUS 26.08.16
- Image 5: Bates Landscape. Photography by Jason Busch
- Image 6: David Boyle Architect. Photograph by Brigid Arnott
- Image 7: Bates Landscape. Photography by Jason Busch
- Image 8: Bates Landscape. Photography by Jason Busch
- Image 9: David Boyle Architect. Photograph by Brigid Arnott
- Image 10: Matthew Pullinger. Photograph by Brett Boardman
- Image 11: Felicella, Elizabeth . "A Daily Dose of Architecture." : Half Dose #70: East Village Penthouse & Rooftop Garden. N.p., n.d. Web. 3 Oct. 2014. <<http://archidose.blogspot.com.au/2009/11/half-dose-70-east-village-penthouse.html>> .
- Image 12: Pacific Bondi. Photography by Glasscott Landscape and Civil
- Image 13: "University of Arkansas." Architecture Faculty Win National Award. N.p., n.d. Web. 3 Oct. 2014. <<http://newswire.uark.edu/articles/8970/architecture-faculty-win-national-award>> .
- Image 14: Bates Landscape. Photography by Jason Busch
- Image 15: Photo by OCULUS 06.09.14
- Image 16: Bates Landscape. Photography by Jason Busch
- Image 17: Bates Landscape. Photography by Jason Busch