NSW GOVERNMENT

July 2025

NSW Housing Pattern Book

Landscape Design Guide

Acknowledgement of Country

We acknowledge Aboriginal people as the First Nations peoples of NSW and pay our respects to Elders past, present and future. We acknowledge the ongoing connection Aboriginal people have to this land and recognise Aboriginal people as the original custodians of this land.

Banksia ericifolia Heath-leaved banksia

Cover image: Row Homes 01 by SAHA

Collaborators:
This landscape design guide was developed in partnership between GANSW and Hassell for users of the NSW Housing Pattern Book. All diagrams and landscape plans are courtesy of Hassell. Users are permitted to adapt the content of this guide, including diagrams and plans, for the purposes of preparing development applications and related planning processes.

Image credits
The architectural renders featured in this booklet are by Choi Render, and the illustrations by Felix Saw. We acknowledge their contributions and the permission granted for the use of these visuals as part of the NSW Housing Pattern Book initiative.

July 2025

Contents

Designed for people, powered by nature

This guide is a companion to the NSW Housing Pattern Book. The guide provides practical and performance-based advice on developing landscape plans for pattern book development.

The guide includes advice for designers, builders, councils and residents on how to create attractive, low- maintenance and sustainable gardens for low- and mid-rise homes. It outlines simple, site-responsive strategies that will connect homes to the outdoors and increase the value and appeal of your pattern book project.

Pattern book developments will bring good design into neighbourhoods and support the creation of vibrant, liveable communities. Well-designed outdoor spaces contribute to these outcomes by fostering healthy, connected and resilient landscapes.

The pattern book and this guide are a resource and a call to action. A call to grow more than homes, and create landscapes that nurture people, the environment and future generations.

Livistona australis Cabbage palm
Image source: NSW Department of Climate Change, Energy, the Environment and Water

Benefits of using the landscape guide

Flexible

Choose from a variety of layouts to customise your outdoor spaces and bring nature into your home.

Compliant and easy to use

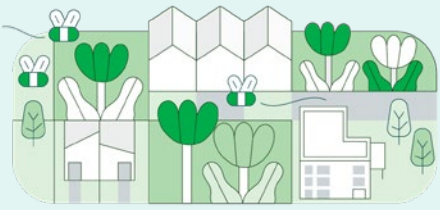
Get clear guidance to help you prepare a landscape plan that meets council planning requirements.

For everyone to enjoy

Local character is defined as much by front yards as front facades. Gardens add value to a home and neighbourhood.

Sustainable

Learn how your garden can reduce urban heat, absorb stormwater and store carbon.



Biodiverse

Plant diverse plant species to attract birds and wildlife to your garden and restore local ecosystems.

Healthy

Improve your wellbeing with outdoor areas that offer shade, privacy, fresh air and space to relax or entertain.

Prepare your landscape plan

1. **Start early**
   Good landscaping starts with early planning. Use this guide to develop your outdoor space in stages, saving you money and streamlining construction.

2. **Check local council requirements**
   Each council has different application requirements. Check your local planning rules to see if you need approval for landscaped areas. Use this guide to meet outdoor space, tree canopy coverage, deep soil zones, and other requirements.

3. **Engage specialists if needed**
   Depending on your local council's rules, you may need to hire a landscape architect, designer, or licensed landscaper to create a landscape plan. If your design includes complex design features, structures or hydraulics, it is best to speak with a specialist early to avoid costly changes later.

4. **Prepare your landscape plan**
   Use this guide with expert input to gather the relevant documentation and develop your landscape plan. Some councils require detailed drawings, planting plans, materials specifications, and technical diagrams. Others may need a landscape architect's report or extra documents to show compliance.

5. **Lodge your landscape plan with your planning application**
   Your landscape plan will form part of your planning application for your overall pattern development.

1. How to use this guide

This guide is intended to be used alongside your pattern drawings.

Technical drawing files for your selected pattern can be purchased and downloaded from the pattern book website. These include indicative site plans that will form the basis of your landscape plan.

Who this guide is for

Applicants
- To help prepare landscape-related planning documentation
- To streamline the planning approval process

Designers, architects and landscape architects
- To support design development and compliance

Builders and developers
- To clarify delivery requirements and align with design objectives

Council planners and certifiers
- To support assessment and ensure projects meet the intent of the pattern book

Homeowners and residents
- To encourage participation in planting and caring for gardens

How to navigate this guide

The guide structure reflects the key components of successful residential landscapes — from soil to tree canopy. Each chapter builds on core principles of regenerative, biodiverse and water-sensitive design.

2.0 Tree planting guidance
Explains how to integrate trees into private and shared gardens, including minimum canopy and deep soil requirements, according to housing type. Offers practical advice for tree selection, positioning, soil volumes and retaining existing trees.

3.0 Green cover guidance
Outlines requirements for green cover areas according to housing type. Includes strategies for increasing plant diversity and coverage. Provides recommendations for species richness, density, layering and permeability to enhance biodiversity and stormwater performance.

4.0 Guidance on designing outdoor spaces
Covers spatial planning and functional elements common across various outdoor areas. Includes front yards, backyards, courtyards, side passages and communal areas. This section also includes requirements for access, shade, fences, bin storage, paving and water-smart design.

6.0 Planting handbook
Offers regionally tailored planting palettes for the different NSW climate zones. Includes suggested species lists grouped by type (trees, shrubs, grasses, ground covers), along with expected size.

7.0 Materials handbook
Presents guidance on landscape construction materials, such as permeable paving, edging and decking, ensuring alignment with sustainability, maintenance and water-sensitive design goals.

How to apply this guide

This guide is not a compliance checklist or prescriptive standard but it consolidates guidance and requirements for pattern book development.

- Use this guide for each step of project development, from selecting a pattern and preparing an application for planning approval, to detailed documentation and construction.
- Use the guidance to respond to local context, especially in relation to site orientation, climate, ecology and topography.
- Also refer to council-specific resources, including native and habitat planting guides, such as City of Sydney's *Greening Sydney Strategy* or the 'Grow Local Illawarra' guides for native and edible gardens.

Supporting documents

Supporting documents and useful links

- Tree Canopy Guide for Low and Mid-Rise Housing
- Apartment Design Guide
- Biodiversity in Place
- Which Plant Where
- Trees Near Me
- Maintenance Guidelines for Australian Green Roofs
- NSW WeedWise – Department of Primary Industries Department of Primary Industries
- NSW Flora Online (PlantNET)
- Australian National Botanic Gardens
- Backyard Buddies
- Birds in Backyards
- DarkSky

Row Homes 01 by SAHA

2. Tree planting guidance

The low-and mid-rise housing patterns are designed to accommodate trees and planting in outdoor spaces. This kind of green infrastructure brings beauty to the home and neighbourhood, while also providing:

- shade and cooling
- privacy and noise reduction
- a positive impact on physical and mental health
- wildlife habitat and increased biodiversity
- improved air quality.

Existing trees can contribute to the tree canopy cover percentage for your lot.

Checklist of landscape design requirements by development type

The table below summarises the pattern book approach to tree canopy and planting, as well as requirements for deep soil provision. These are based on the NSW *Tree Canopy Guide for Low and Mid Rise Housing*.

Site area	Tree canopy cover (whole development)	Number of trees (planted in deep soil)	Deep soil (min % site area)
Terraces			
<300 m²	15% min tree canopy cover	For every lot, at least one small tree	15% min deep soil
300 m² – 600 m²	20% min tree canopy cover	For every 200 m², or part thereof, at least one small tree	20% min deep soil
>600 m²	25% min tree canopy cover	For every 225 m², or part thereof, at least one medium tree	25% min deep soil
Semis			
<300 m²	15% min tree canopy cover	For every lot, at least one small tree	15% min deep soil
300 m² – 600 m²	20% min tree canopy cover	For every 200 m², or part thereof, at least one small tree	20% min deep soil
>600 m²	25% min tree canopy cover	For every 225 m², or part thereof, at least one medium tree	25% min deep soil
Manor homes			
<1,000 m²	15% min tree canopy cover	For every 300 m², or part thereof, at least one medium tree	15% min deep soil
1,000 m²–3,000 m²	25% min tree canopy cover	For every 200 m², or part thereof, at least one medium tree	25% min deep soil
>3,000 m²	30% min tree canopy cover	For every 350 m², or part thereof, at least 2 medium or one large tree	30% min deep soil
Row homes			
<1,000 m²	15% min tree canopy cover	For every 300 m², or part thereof, at least one medium tree	15% min deep soil
1,000 m²–3,000 m²	25% min tree canopy cover	For every 200 m², or part thereof, at least one medium tree	25% min deep soil
>3,000 m²	30% min tree canopy cover	For every 350 m², or part thereof, at least 2 medium or one large tree	30% min deep soil

Row Homes 01
by SAHA

How much tree canopy cover is required?

What is it?

Tree canopy cover refers to the land shaded by the overhead spread of tree branches and leaves, calculated as a percentage of the overall site area. This percentage calculation is based on the anticipated size the tree will reach at maturity. The diagrams below show assumed sizes of small, medium and large trees as required for different lot sizes.

Value of existing trees

Retain existing trees on site where possible. Existing trees contribute to the tree canopy cover required to be provided within your lot. Existing trees provide immediate impact and value, energy savings from shade and cooling, privacy, habitat, improved air quality and soil health.

Tips for selecting the right trees

Prioritise native trees

Planting at least 50% native trees is recommended.

Benefits

- Supporting wildlife by providing food, shelter and habitat for local species
- Preserving and enhancing the local landscape character and culture
- Requiring less care and resources than non-native trees

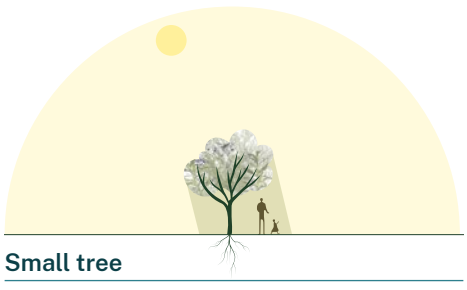
Choose between evergreen or deciduous trees

Deciduous trees are recommended when winter sun in the garden is desired.

Recommended installation size

Install trees at a minimum 75-L size. This size offers a balance between cost, ease of handling, day-one impact, care during establishment and time to establish. Consider a larger planting size if day-one impact and amenity is a priority.

Tree sizing assumptions

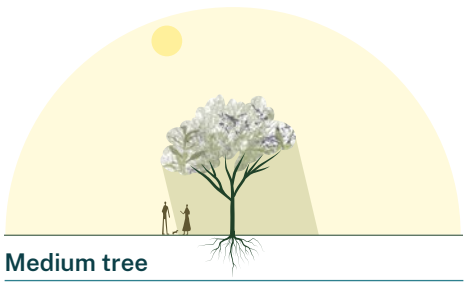


Small tree

Height: 6–8 m

Canopy: 6 m diameter

Tree canopy cover: 28 m^2

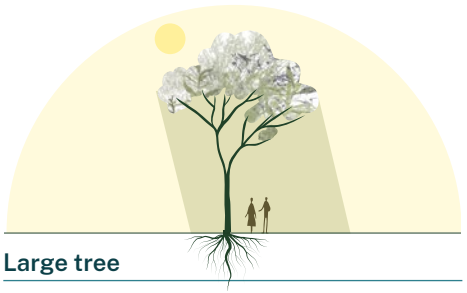


Medium tree

Height: 8–12 m

Canopy: 8 m diameter

Tree canopy cover: 50 m^2



Large tree

Height: 12–18 m

Canopy: 12 m diameter

Tree canopy cover: 113 m^2

Diagram source: Hassell

3. Green cover guidance

Green cover includes all types of planting within the landscape and garden, including turf, trees, shrubs, grasses and ground covers.

Selecting plants for a thriving garden

Aim to maximise the diversity of plants within the landscaped area.

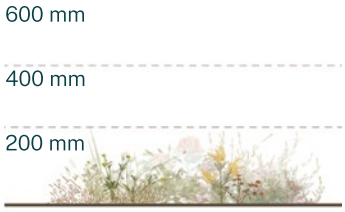
Benefits

- A wide variety of plants protects your garden from pests, diseases, and weather extremes, ensuring a more stable and healthy landscape.
- Diverse plant species attract different pollinators and beneficial insects, improving ecosystem health.
- Variation in the vertical and horizontal structure of planting provides more environmental conditions and opportunities for organisms at different life stages, increasing biodiversity of invertebrates and other wildlife.

Tips for achieving planting diversity

- Consider your local and site-specific conditions when selecting plant species and turf.
- Allow for a minimum of 15 different plant species in the garden.
- Allow for minimum of 3 different plant species from each plant type – shrubs, grasses and ground covers.
- Refer to the planting handbook in section 6.0 for examples of plant species suitable for the various NSW climate zones.

Categories of planting for garden beds and lawn alternatives

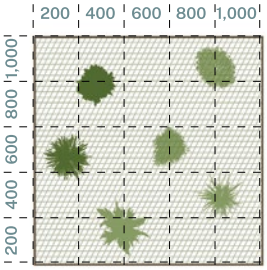


Ground covers
0 – 200 mm

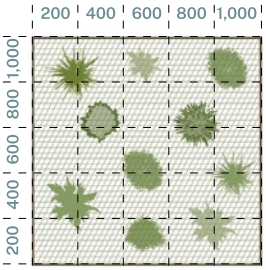
Grasses/strappy leaved
200 – 400 mm

Shrubs
500 – 800 mm

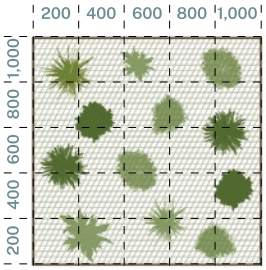
Recommended planting setouts for garden beds



6 plants per square metre



10 plants per square metre



12 plants per square metre

Definition of native and exotic plant species

Exotic plant species
Defined as species originating outside a particular location, whether that is within Australia or overseas.

Native plant species
Defined as species originating within Australia. Indigenous species are defined as native to a particular location and can also be found in other locations.

Diagram source: Hassell

How to plant for a biodiverse garden

- Dense planting supports biodiversity and structural complexity. For garden beds with mass planting of different plant types and species, consider planting 10 plants per square metre (illustrated above).
- Prioritise plants that provide food, shelter and habitat connections for native wildlife.

Permeable surfaces

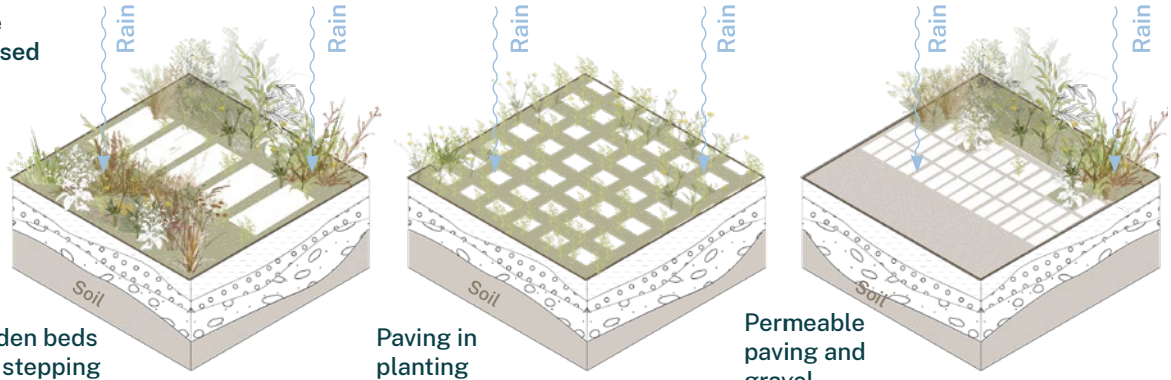
Permeable surface treatments are recommended as an alternative to hard, non-permeable surfaces, including for driveways, where suitable. Permeable surfaces include ground cover planting, turf, gravel, pebbles and permeable paving.

Refer to the materials handbook in section 7.0 for further information.

Benefits

Permeable surfaces reduce runoff, mitigate flooding and erosion, improve soil health and drainage, and allow rainwater to soak into the ground and recharge groundwater.

Where permeable surfaces can be used



Garden beds and stepping stones

Paving in planting

Permeable paving and gravel

Green cover recommendations

The table below summarises how to achieve successful green cover in residential gardens according to dwelling type.

	Row homes	Manor homes	Semis	Terraces
Lawn	Limit turf to backyards Turf maximum 30% of the backyard area	Limit turf to backyards Turf maximum 30% of the backyard area	Turf maximum 15% of the front yard area Turf maximum 35% of the backyard area	Limit turf to backyards Turf maximum 35% of the backyard area
Planting	Planting to cover a minimum 35% of the total backyard Planting to cover a minimum 40% of the total communal landscape areas	Planting to cover a minimum 35% of the total backyard Planting to cover a minimum 40% of the total communal landscape areas	Planting to cover a minimum 35% of the total front and backyard areas	Planting to cover a minimum 35% of the total front and backyard areas
Internal courtyards	Not applicable	Not applicable	Planting to cover a minimum 40% of the total courtyard area Consider solar access when selecting plants for a courtyard as they may receive less sunlight than other parts of a garden	

Diagram source: Hassell

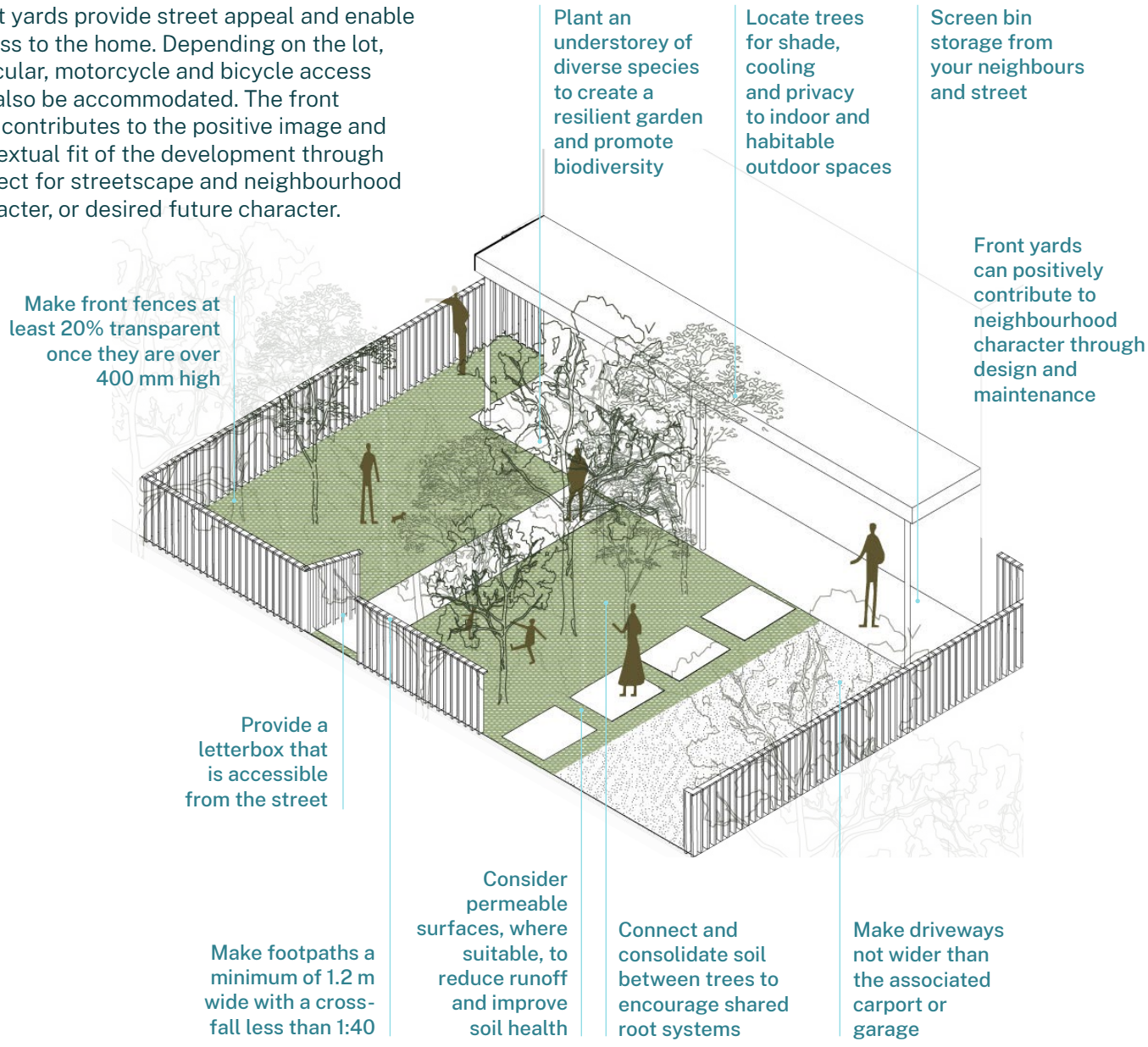
4. Designing outdoor spaces

The pattern book designs feature diverse outdoor spaces, including front yards, backyards, side passages and courtyards, with some also offering potential for rooftop terraces.

These well-designed outdoor spaces can enhance the health and wellbeing of residents, neighbours and local ecosystems by providing amenity, usability, privacy, access and social opportunity.

Front yards

Front yards provide street appeal and enable access to the home. Depending on the lot, vehicular, motorcycle and bicycle access can also be accommodated. The front yard contributes to the positive image and contextual fit of the development through respect for streetscape and neighbourhood character, or desired future character.



Source: Hassell

Terraces 01 by Carter Williamson

Backyards

Rear gardens are often the primary outdoor amenity for residential developments. They should be designed to suit and adapt to the lifestyle of building occupants and extend the living space of the home.

Reuse rainwater for watering and irrigating your garden

Locate trees to provide maximum shade for play and living spaces

Consider the microclimate of the various areas within the garden and select plant species suitable for the site conditions

Plant all trees a minimum of 3 m from houses to allow space for roots and canopy

Consider the benefits of connected canopy between trees next door and in the street

Select a range of diverse plant species to attract pollinators, build resilience and improve ecosystem health

Provide maximum 40% paved or decked area in the backyard

Make boundary fences not higher than 1.8 m high or 1.2 m if built from masonry

Provide at least one hosecock per backyard

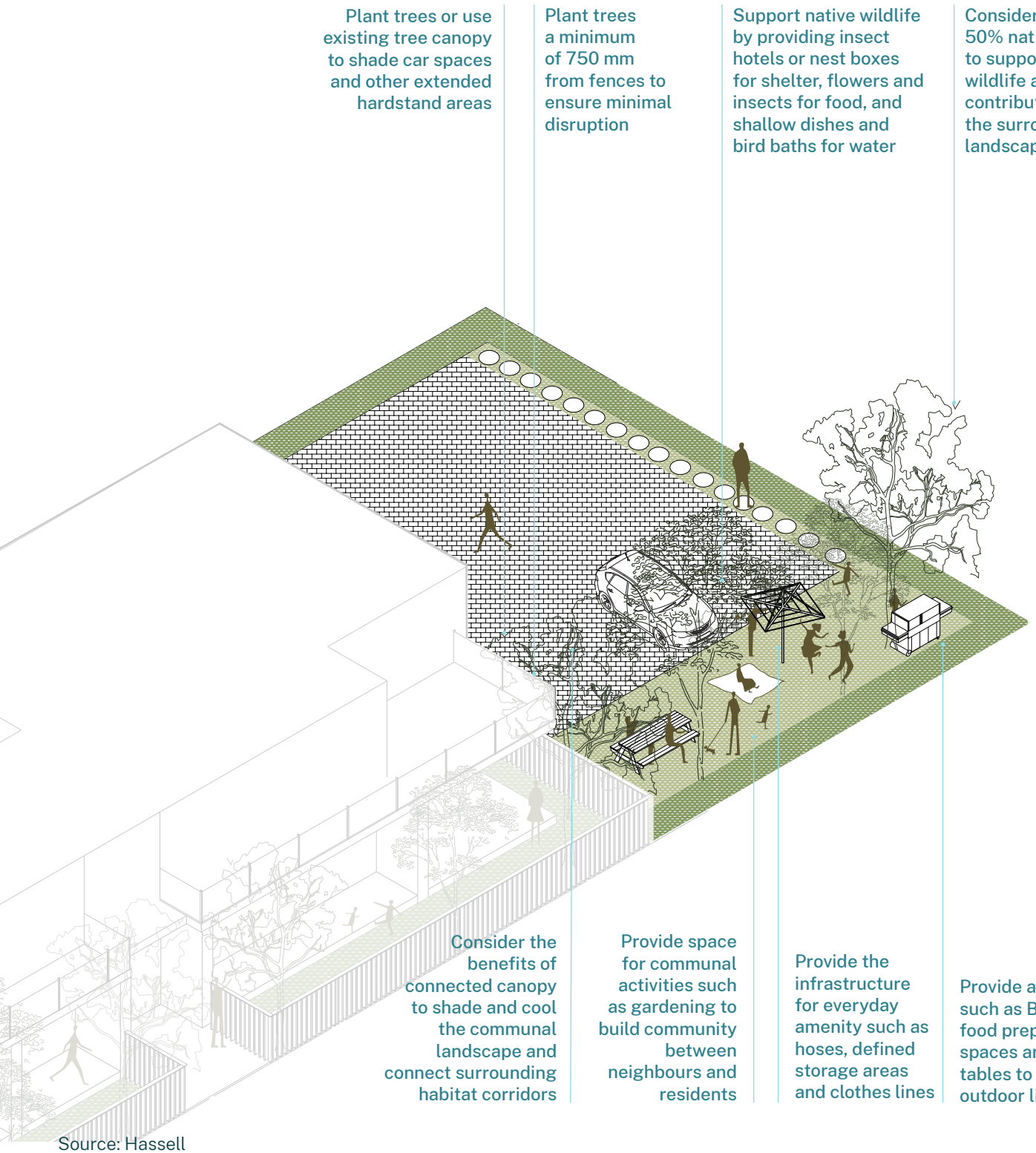
Create habitats for native wildlife by providing food sources such as flowers and insects, water sources like shallow dishes and bird baths, and shelter such as dense shrubs, rock and logs

Source: Hassell

Communal landscaped spaces

Communal outdoor areas provide opportunities for social interaction, extending private homes and yards, and offering larger spaces for gatherings and celebrations.

These spaces are also practical and can accommodate car spaces, washing lines, shared bins, communal garden beds and composting areas.



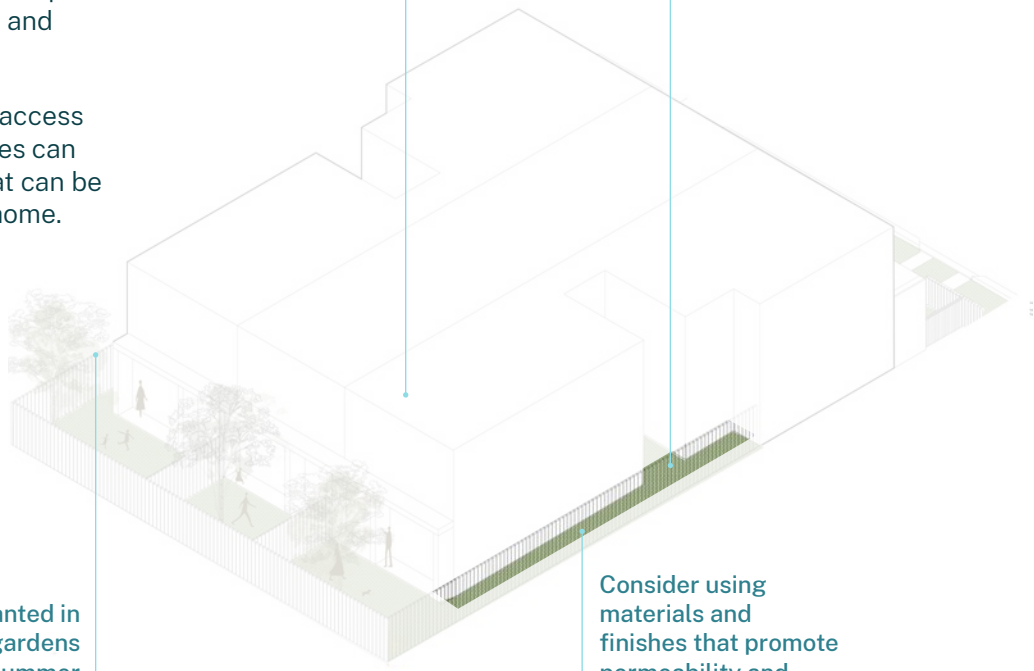
Source: Hassell

Side passages

Side passages connect the outdoor spaces of homes and apartments.

They provide places to locate bins and water tanks. Low light levels in these areas require consideration when selecting plants and materials.

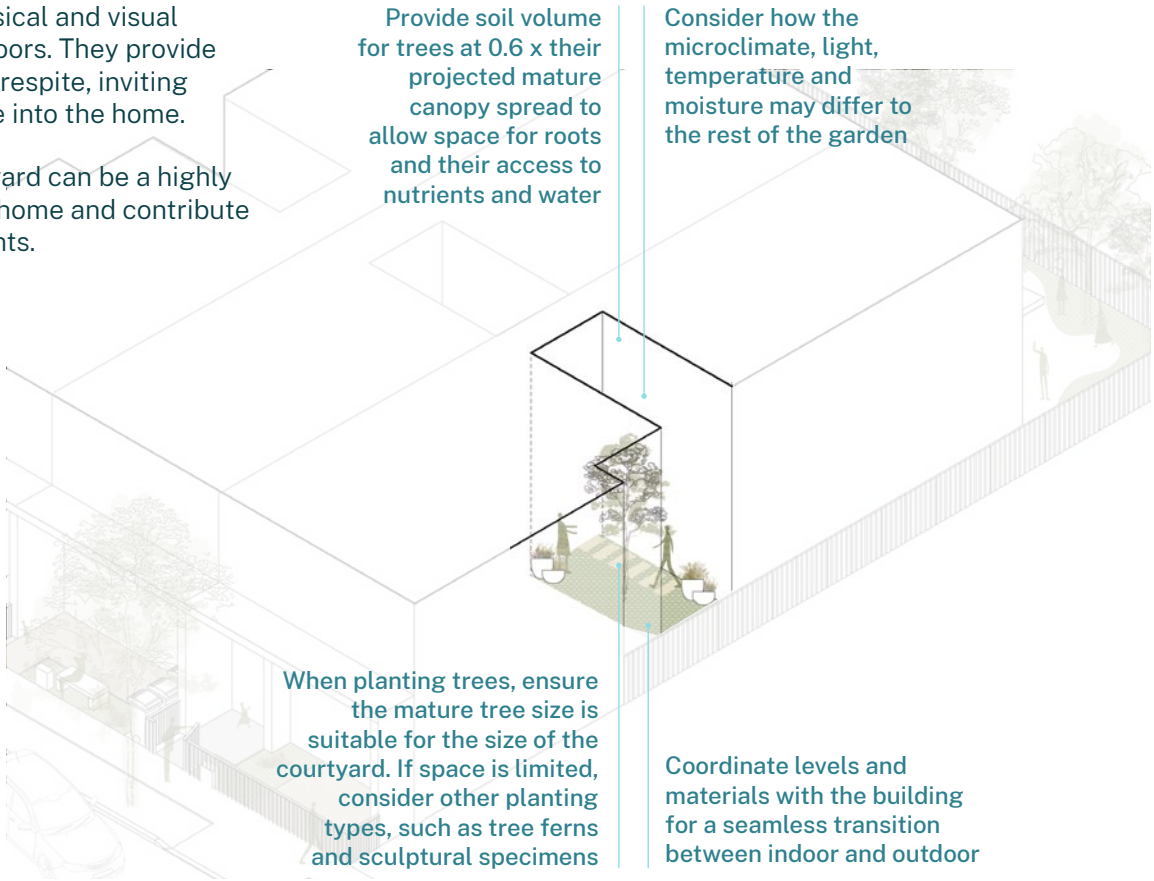
While primarily serving a utility and access purpose, well-designed side passages can also be thriving, pleasant spaces that can be appreciated outside and inside the home.



Courtyards

Courtyards offer a physical and visual connection to the outdoors. They provide a moment of relief and respite, inviting natural light and nature into the home.

A well-designed courtyard can be a highly desirable addition to a home and contribute to deep soil requirements.



Source: Hassell

5. Glossary of terms

Biodiversity The variety of species of plants, animals and microorganisms, their genes, and the ecosystems they comprise, often considered in relation to a particular area.

Built form The physical and constructed elements of the built environment, including buildings, structures and infrastructure within a particular space or urban area.

Canopy The uppermost layer of a tree, formed by its branches and leaves. It represents the extent of a tree's crown and can vary in size, shape and density depending on the species, age and environmental conditions. In a broader context, the term can also describe the collective layer of foliage formed by the crowns of multiple trees within a specific area, such as a forest or urban environment.

Canopy cover The proportion of the ground that is covered by the vertical projection of tree crowns (the uppermost layer of branches and leaves) when viewed from above. It is typically expressed as a percentage of the total land area and is an important measure for assessing vegetation density, urban forestry health, and ecosystem services.

Climbers Climbing plants.

Cultivar A plant variety that has been produced in cultivation by selective breeding.

Deep soil An area of soil unimpeded by buildings or structures above and below ground, allowing sufficient space for the planting and healthy growth of new trees.

Endemic Species that are native and can be found only in that location.

Exotic species Species of plants that originate outside a particular location, whether that is within Australia or overseas.

GANSW Government Architect New South Wales

Grasses A wide variety of non-woody plants including sedges, rushes and lilies.

Green cover All types of planting within the landscape and garden, including turf, trees, shrubs, grasses and ground covers.

Ground cover A low growing woody or herbaceous plant.

Growing media The material through which roots grow and extract water and nutrients.

Hardscape The non-plant elements in a landscape, such as materials used for construction, pavement, walls, decks, fences and other permanent or semi-permanent structures.

Indigenous species Species that are native to a local area and are also native to other areas.

Mulch A layer of material applied to the surface of the soil to suppress weed growth and retain soil moisture.

Native Species that originate on the continent Australia.

Permeable paving A type of surface material that allows water to pass through it, rather than running off. This type of paving is designed with gaps, pores or voids that enable rainwater or other surface water to infiltrate into the ground below.

Perennial A perennial plant is a type of plant that lives for more than 2 years, growing and blooming season after season.

Planting To establish a vegetation cover by planting of trees, shrubs, grasses and ground covers.

Planting sizes Plants are available in different sizes from various sources such as nurseries. Rigid walled containers range from tubestock to 300 mm. Larger plants are generally supplied in woven bags or specialist containers if ex-ground stock. Trees supplied in containers larger than 300 mm or 250 L must comply with Australian Standard *AS 2303:2018 Tree stock for landscape use*. The size and style of container should be appropriate for the species growth, habit and production requirements.

Provenance The location from which a plant is sourced.

Shrub A woody perennial plant (smaller than a tree), that usually has several stems arising at or near the ground and giving the plant a bushy appearance.

Softscape The living, natural elements of a landscape, including trees, shrubs, grasses, ground covers, turf and other organic components.

Species diversity A measure that includes both the number of species and the relative abundance of each species in a community or ecosystem.

Species richness The number of different species present in a given community or ecosystem.

Trafficable A surface or area that is capable of being travelled over by vehicles or people.

Tree A long-lived woody perennial plant, usually greater than 3 m in height, with one or relatively few main stems or trunks. Trees have a variety of descriptions in different regulations and jurisdictions.

The NSW Housing Pattern Book groups trees into 3 categories for the performance criteria:

- small tree – mature height 6–8 m, canopy spread 6 m
- medium tree – mature height 8–12 m, canopy spread 8 m
- large tree – mature height 12–18 m, canopy spread 12 m.

Turf Grass maintained at a short relatively even length, used as a ground cover, or lawn that can be established as rolls or seeded.

Understorey The layer of vegetation or planting beneath the canopy of a tree or collection of trees, consisting of shrubs, grasses and ground covers.

Water-sensitive urban design An engineering and design approach to make best use of the urban water cycle (stormwater and groundwater) through holding and filtration techniques that also help to reduce erosion and flooding.

Planting handbook

The following pages suggest plant species according to the different NSW climate zones.

Craspedia globosa Billy buttons
Image source: NSW Department of Climate Change, Energy, the Environment and Water

6. Choosing plants for your climate

Selecting plants that are well suited to your climate zone is essential for ensuring their healthy growth. Mature, thriving trees and plantings can have a big impact on the long-term success of your development.

By choosing species adapted to your region's temperature, rainfall, and overall growing conditions, you significantly enhance their longevity and ability to thrive. This approach fosters a more resilient and productive garden, requiring less maintenance and intervention.

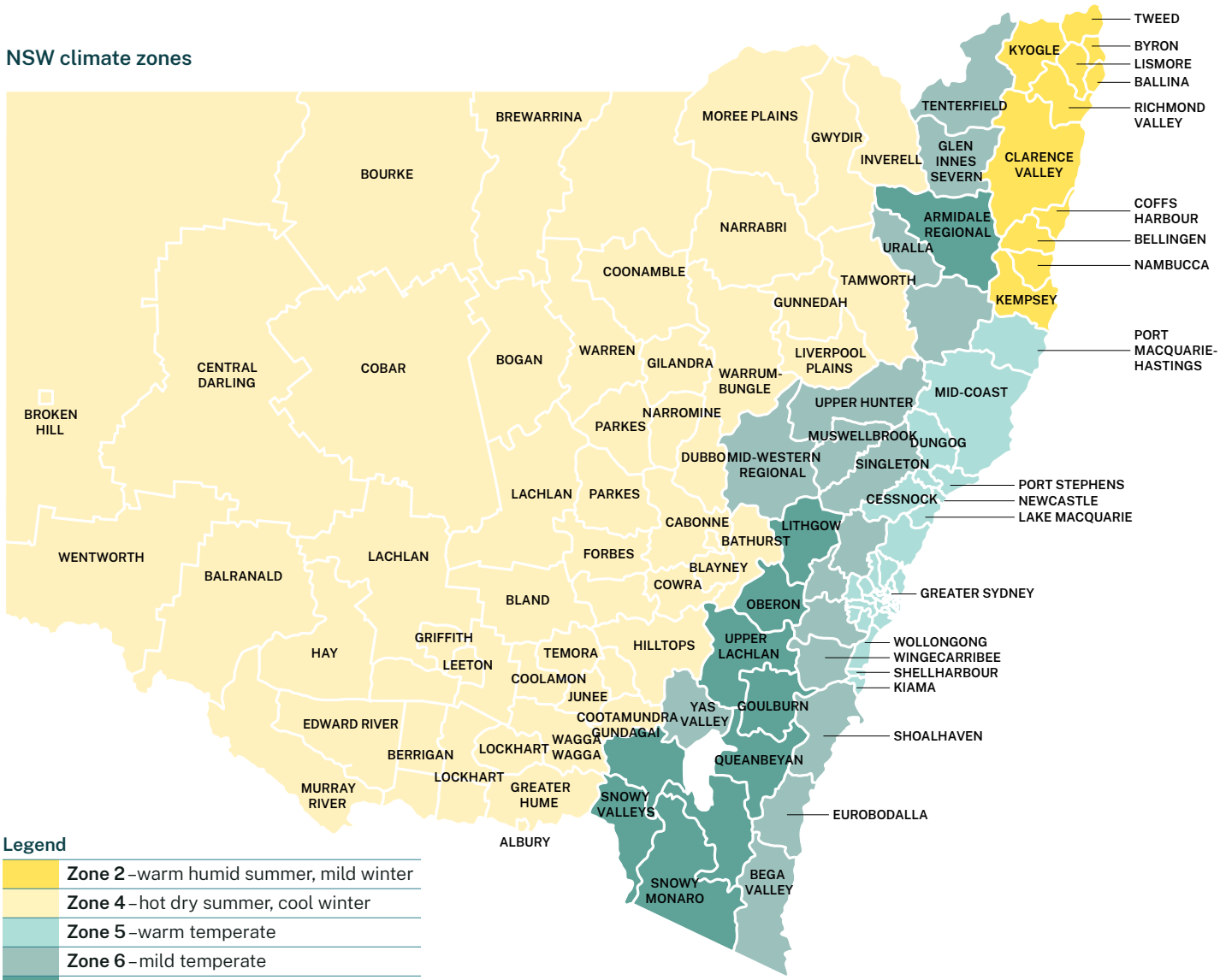
What climate zone is your development in?

NSW has a diverse climate encompassing multiple climate zones, such as humid subtropical, temperate coastal, oceanic and alpine regions.

When selecting plants for your development, identify the corresponding climate zone to ensure you choose plant species best suited to the local conditions. The following pages provide plant species suitable for each climate zone.

For additional guidance, consider consulting a local nursery or horticultural expert. Online resources such as the Which Plant Where database offer valuable insights into plant selection for climate resilience.

NSW climate zones

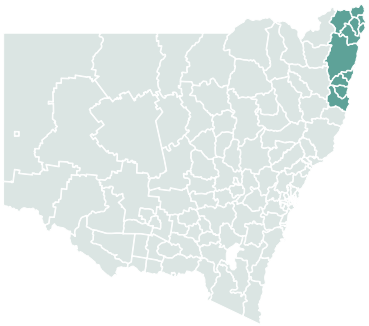


Legend

	Zone 2 – warm humid summer, mild winter
	Zone 4 – hot dry summer, cool winter
	Zone 5 – warm temperate
	Zone 6 – mild temperate
	Zone 7 – cool temperate

Source: Hassell

6.1 Climate zone 2 – indicative plant species

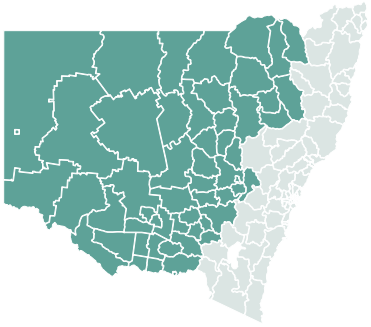


The climate between Cresent Head and Tweed Heads is characterised by warm, humid summers and mild winters.

Plant species suitable for this zone

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m^2	Tree size
Trees								
ACMhem	*Acmena hemilampra*	Blush satinash	Indigenous	6-8 m	3-4 m	75 L	n/a	Small
BACcit	*Backhousia citriodora*	Lemon-scented myrtle	Native	4-20 m	4-12 m	75 L	n/a	Medium
LIVaus	*Livistona australis*	Cabbage tree palm	Indigenous	10-20 m	3 m	75 L	n/a	Small
FLIaus	*Flindersia australis*	Crows ash	Indigenous	15-30 m	4-15 m	75 L	n/a	Large
RANfit	*Randia fitzalanii*	Native gardenia	Native	3-6 m	2-4 m	75 L	n/a	Small
Shrubs								
ALOmac	*Alocasia macrorrhiza*	Elephant ears	Native	1-3 m	1-2 m	200 mm	2	
ALPcae	*Alpinia caerulea*	Native ginger	Native	1-2.5 m	1-1.5 m	200 mm	5	
ASPaus	*Asplenium australasicum*	Birds nest fern	Indigenous	0.5-1.5 m	0.5-1.5 m	200 mm	3	
AUScop	*Austromyrtus dulcis x tenuifolia 'copper tops'*	Copper tops	Native	0.3-1 m	1-1.5 m	200 mm	5	
BLEsil	*Blechnum 'silver lady'*	Silver lady fern	Exotic	0.5-1 m	0.5-1 m	200 mm	5	
DORpal	*Doryanthes palmeri*	Spear lily	Indigenous	1.5-3 m	1.5-3 m	200 mm	2	
HIBasp	*Hibbertia aspera*	Rough guinea flower	Indigenous	0.3 m	1 m	200 mm	5	
HYMfla	*Hymenosporum flavum 'gold nugget'*	Dwarf native frangipani	Native	0.5-0.75 m	0.5-0.75 m	200 mm	5	
Grasses and strappy leaf plants								
CRIped	*Crinum pedunculatum*	Swamp lily	Indigenous	1-2 m	1-2 m	140 mm	5	
DIAcae	*Dianella caerulea*	Blue flax lily	Indigenous	0.5 m	0.5 m	140 mm	9	
DIErob	*Dietes robinsoniana*	Lord Howe wedding lily	Native	0.6-1 m	0.6-1 m	140 mm	6	
JUNusi	*Juncus usitatus*	Common rush	Indigenous	0.4-1.1 m	0.3-0.5 m	140 mm	9	
LOMhys	*Lomandra hystrix*	Green mat rush	Indigenous	0.9-1.3 m	0.9-1.3 m	140 mm	6	
LOMlon	*Lomandra longifolia*	Spiny-headed mat-rush	Indigenous	1 m	1-1.5 m	140 mm	6	
NEOmar	*Neomarica gracilis*	Brazilian walking iris	Exotic	0.5-1 m	0.5-1 m	140 mm	9	
POAesk	*Poa labillardierei 'Eskdale'*	Eskdale	Native	1 m	0.5-0.6 m	140 mm	9	
Ground covers and scramblers								
APHres	*Aphanopetalum resinosum*	Gum vine	Indigenous	0.3 m scrambler	0.5-4 m	140 mm	6	
BILsca	*Billardiera scandens*	Apple berry	Indigenous	0.3 m scrambler	0.5-3 m	140 mm	6	
CAScou	*Casuarina glauca 'Cousin It'*	Cousin It	Native	0.1-0.2 m	1-2 m	140 mm	6	
CISant	*Cissus antarctica*	Kangaroo vine	Indigenous	0.3 m	1-4 m	140 mm	6	
DICrep	*Dichondra repens*	Kidney weed	Indigenous	0.1 m	0.5-1 m	140 mm	9	
HARvio	*Hardenbergia violacea*	Purple sarsaparilla	Native	0.3 m	1-3 m	140 mm	6	
HIBsca	*Hibbertia scandens*	Yellow guinea flower	Indigenous	0.3 m	1-2 m	140 mm	6	
MYObon	*Myoporum boninense subsp. australe*	Coastal boobialla	Indigenous	0.3-0.6 m	1 m	140 mm	6	
MYOins	*Myoporum insulare 'prostrate'*	Coastal boobialla	Native	0.3 m	1-1.5 m	140 mm	6	
SCAaem	*Scaevola aemula*	Fairy fan-flower	Native	0.3-0.6 m	0.5-1 m	140 mm	9	
TETtet	*Tetragonia tetragonioides*	Warrigal greens	Native	0.3 m	1-2 m	140 mm	6	
VIOhed	*Viola hederacea*	Native violet	Indigenous	0.1 m	0.6-1 m	140 mm	9	

6.2 Climate zone 4 – indicative plant species

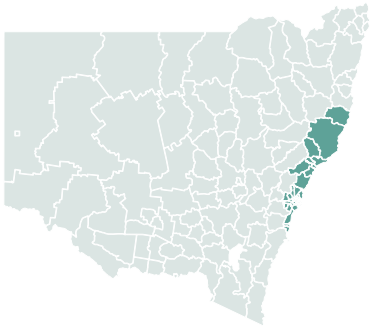


The climate in places such as Wagga Wagga, Dubbo, Tamworth and Albury is characterised by hot, dry summers and cool winters.

Plant species suitable for this zone

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m^2	Tree size
Trees								
BRArup	*Brachychiton rupestris*	Queesland bottle tree	Native	4-18 m	2-12 m	75 L	n/a	Medium
CORmac	*Corymbia maculata*	Spotted gum	Native	15-30 m	8-15 m	75 L	n/a	Large
EUCsid	*Eucalyptus sideroxylon*	Red ironbark	Indigenous	10-25 m	6-15 m	75 L	n/a	Large
MELlin	*Melaleuca linariifolia*	Snow-in-summer	Native	4-10 m	4-6 m	75 L	n/a	Small
OLEeur	*Olea europaea*	European olive	Exotic	4-7 m	3-5 m	75 L	n/a	Small
Shrubs								
ATRnum	*Atriplex nummularia*	Old man saltbush	Indigenous	1.5-3 m	2-3 m	200 mm	5	
CALwhi	*Callistemon citrinus 'white Anzac'*	White Anzac bottlebrush	Native	0.6-1.2 m	1.5-3 m	200 mm	5	
CALgre	*Callistemon salignus 'great balls of fire'*	Great balls of fire bottlebrush	Native	1-3 m	1-3 m	200 mm	3	
CASgre	*Casuarina glauca 'green wave'*	Green wave	Native	1.5-2 m	1.5-2 m	200 mm	3	
DODvis	*Dodonaea viscosa*	Hop bush	Indigenous	1.5-3 m	1-2 m	200 mm	3	
ENCtom	*Enchylaena tomentosa*	Ruby saltbush	Indigenous	1 m	1 m	200 mm	5	
EREmac	*Eremophila maculata*	Emu bush	Indigenous	1-2 m	2-3 m	200 mm	5	
INDaus	*Indigofera australis*	Austral indigo	Native	1-2 m	1-2 m	200 mm	5	
MELthy	*Melaleuca thymifolia*	Honey myrtle	Native	1-1.2 m	1-1.2 m	200 mm	5	
OZOdio	*Ozothamnus diosmifolius*	Rice flower	Native	0.5-1.5 m	0.5-1 m	200 mm	5	
RHAaus	*Rhagodia spinescens 'Aussie flat bush'*	Aussie flat bush	Native	0.3-0.5 m	1 m	200 mm	5	
Grasses and strappy leaf plants								
AUScae	*Austrodanthonia caespitosa*	Wallaby grass	Indigenous	0.3-0.8 m	0.3-0.5 m	140 mm	9	
BULbul	*Bulbine bulbosa*	Bulbine lily	Indigenous	0.3-0.6 m	0.3-0.5 m	140 mm	9	
DICmac	*Dichelachne micrantha*	Shorthair plumegrass	Indigenous	0.3-1.2 m	0.3 m	140 mm	9	
MICsti	*Microlaena stipoides var. stipoides*	Weeping grass	Indigenous	0.7 m	0.3-0.6 m	140 mm	9	
ORTmul	*Orthrosanthus multiflorus*	Morning flag	Native	0.4-0.6 m	0.4-0.6 m	140 mm	9	
POAlab	*Poa labillardierei var. labillardierei*	Tussock grass	Indigenous	1.2 m	0.6-0.7 m	140 mm	9	
THEtri	*Themeda triandra*	Kangaroo grass	Indigenous	0.6-1 m	0.6-1 m	140 mm	9	
Ground covers and scramblers								
AJUaus	*Ajuga australis*	Austral bugle	Indigenous	0.5 m	0.5-1 m	140 mm	6	
ARTmil	*Arthropodium milleflorum*	Vanilla lily	Indigenous	0.3-1 m	0.3 m	140 mm	9	
ARTstr	*Arthropodium strictum*	Chocolate lily	Indigenous	0.3-1 m	0.3 m	140 mm	9	
CALcit	*Calocephalus citreus*	Lemon beauty-heads	Indigenous	0.2-0.5 m	0.3-1 m	140 mm	6	
CHRapi	*Chrysocephalum apiculatum*	Yellow buttons	Indigenous	0.15 m	0.3-0.6 m	140 mm	6	
CHRsem	*Chrysocephalum semipapposum*	Clustered everlasting	Indigenous	0.3-0.6 m	0.6 m	140 mm	6	
CONpin	*Convolvulus angustissimus 'pink sapphire'*	Pink sapphire	Native	0.1 m	1-2 m	140 mm	6	
CRAglo	*Craspedia globosa*	Billy buttons	Indigenous	0.5-1 m	0.3 m	140 mm	6	
DIScra	*Disphyma crassifolium*	Round leaved pigface	Indigenous	0.2 m	1 m	140 mm	6	
GRElan	*Grevillea lanigera 'Mt. Tamboritha'*	Mt. Tamboritha	Native	0.3-0.5 m	0.6-1.5 m	140 mm	6	
PELstr	*Pelargonium striatellum 'Edna Walling pop up'*	Edna Walling pop up	Native	0.15 m	0.9 m	140 mm	6	
PLEpar	*Plectranthus parviflorus*	Cockspur flower	Indigenous	0.1-0.7 m	0.2-0.5 m	140 mm	6	
PYCglo	*Pycnosorus globosus*	Billy buttons	Indigenous	0.5 m	1 m	140 mm	6	
WAHstr	*Wahlenbergia stricta*	Australian bluebell	Indigenous	0.1-0.9 m	0.5 m	140 mm	9	

6.3 Climate zone 5 – indicative plant species

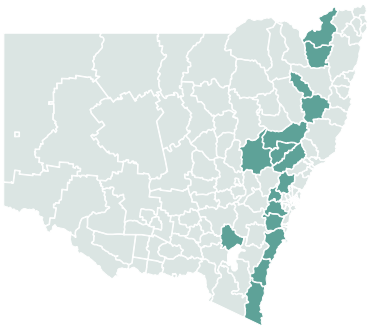


The climate in places such as Sydney, Newcastle, Port Macquarie and Kiama is warm temperate.

Plant species suitable for this zone

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m^2	Tree size
Trees								
BANint	*Banksia integrifolia*	Coast banksia	Indigenous	4-10 m	3-8 m	75 L	n/a	Small
CORmac	*Corymbia maculata*	Spotted gum	Indigenous	8-15 m	6-12 m	75 L	n/a	Medium
CUPana	*Cupaniopsis anacardioides*	Tuckeroo	Indigenous	3-10 m	3-7 m	75 L	n/a	Small
TRIlau	*Tristaniopsis laurina*	Water gum	Indigenous	4-10 m	4-6 m	75 L	n/a	Small
Shrubs								
ACMsub	*Acmena smithii 'sublime'*	Sublime lilly pilly	Native	3-5 m	1-3 m	200 mm	2	
BANeri	*Banksia ericifolia*	Heath-leaved banksia	Indigenous	1-3 m	1-2.5 m	200 mm	5	
CORalb	*Correa alba*	White correa	Indigenous	1-2 m	1-2 m	200 mm	5	
GREser	*Grevillea sericea*	Pink spider flower	Indigenous	1-2 m	1-2 m	200 mm	5	
PHEsqu	*Phebalium squamulosum*	Scaly phebalium	Indigenous	1-1.5 m	1-1.5 m	200 mm	5	
PHIwin	*Philotheca myoporoides*	Long-leaf wax flower	Indigenous	0.8 m	0.8 m	200 mm	5	
WESfru	*Westringia fruticosa*	Coastal rosemary	Indigenous	1-2 m	1-2 m	200 mm	5	
Grasses and strappy leaf plants								
DIAcae	*Dianella caerulea*	Blue flax lily	Indigenous	0.5 m	0.5 m	140 mm	9	
DIArev	*Dianella revoluta*	Blueberry lily	Indigenous	0.5-0.8 m	0.3-0.6 m	140 mm	9	
LOMkat	*Lomandra longifolia 'katrinus/katrinus deluxe'*	Katrinus/katrinus deluxe	Native	0.7 m	0.7-1 m	140 mm	6	
LOMver	*Lomandra longifolia 'verday'*	Verday	Native	0.5-0.6 m	0.8-1 m	140 mm	9	
PENnaf	*Pennisetum alopecuroides 'nafray'*	Nafray	Native	0.6 m	0.6 m	140 mm	9	
POAlab	*Poa labillardierei var. labillardierei*	Tussock grass	Indigenous	1.2 m	0.6-0.7 m	140 mm	9	
POApoi	*Poa poiformis*	Coastal tussock grass	Indigenous	0.5 m	0.5 m	140 mm	9	
Ground covers and scramblers								
ACThel	*Actinotus helianthi*	Flannel flower	Indigenous	0.3-1.2 m	0.3-0.5 m	140 mm	6	
APHres	*Aphanopetalum resinosum*	Gum vine	Indigenous	0.3 m scrambler	0.5-4 m	140 mm	6	
CARgla	*Carpobrotus glaucescens*	Pig face	Indigenous	0.15 m	1-2 m	140 mm	6	
CAScou	*Casuarina glauca 'Cousin It'*	Cousin It	Native	0.1-0.2 m	1-2 m	140 mm	6	
DICrep	*Dichondra repens*	Kidney weed	Indigenous	0.1 m	0.5-1 m	140 mm	9	
GOOpro	*Goodenia ovata 'prostrate'*	Prostrate hop goodenia	Native	0.3 m	0.6-1 m	140 mm	6	
HARvio	*Hardenbergia violacea*	Purple sarsaparilla	Indigenous	0.3 m	1-3 m	140 mm	6	
HIBsca	*Hibbertia scandens*	Yellow guinea flower	Indigenous	0.3 m	1-2 m	140 mm	6	
MYOins	*Myoporum insulare 'prostrate'*	Coastal boobialla	Native	0.3 m	1-1.5 m	140 mm	6	
PELaus	*Pelargonium australe*	Coastal geranium	Indigenous	0.4 m	0.3-0.6 m	140 mm	6	
SCAcal	*Scaevola calendulacea*	Dune fan flower	Indigenous	0.2 m	1-3 m	140 mm	6	
TETtet	*Tetragonia tetragonioides*	Warrigal greens	Indigenous	0.3 m	1-2 m	140 mm	6	
VIOhed	*Viola hederacea*	Native violet	Indigenous	0.1 m	0.6-1 m	140 mm	9	
XERdar	*Xerochrysum 'Dargan Hill monarch'*	Everlasting daisy	Native	0.5-1 m	0.5-1.5 m	140 mm	6	

6.4 Climate zone 6 – indicative plant species

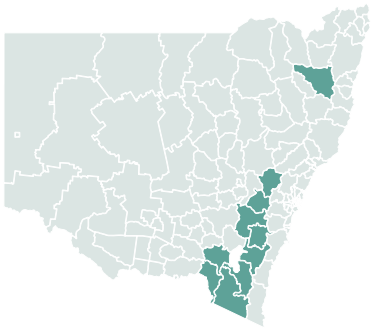


The climate in places such as Penrith, Blue Mountains, Batemans Bay, Bowral, Mudgee is mild temperate.

Plant species suitable for this zone

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m²	Tree size
Trees								
ANGflo	*Angophora floribunda*	Rough-barked apple	Indigenous	10-20 m	6-20 m	75 L	n/a	Large
BRApop	*Brachychiton populneus*	Kurrajong	Indigenous	5-15 m	3-15 m	75 L	n/a	Large
CORmac	*Corymbia maculata*	Spotted gum	Indigenous	8-15 m	6-12 m	75 L	n/a	Large
EUCcre	*Eucalyptus crebra*	Narrow-leaved ironbark	Indigenous	20-30 m	8-12 m	75 L	n/a	Large
MELlin	*Melaleuca linariifolia*	Snow-in-summer	Indigenous	4-10 m	4-6 m	75 L	n/a	Small
Shrubs								
CALgre	*Callistemon salignus 'great balls of fire'*	Great balls of fire bottlebrush	Native	1-3 m	1-3 m	200 mm	3	
CASgre	*Casuarina glauca 'green wave'*	Green wave	Native	1.5-2 m	1.5-2 m	200 mm	3	
CORref	*Correa reflexa*	Native fuschia	Indigenous	0.5-1.5 m	0.5-1.5 m	200 mm	5	
BURspi	*Bursaria spinosa*	Sweet bursaria	Indigenous	3-10 m	2-4 m	200 mm	5	
DODvis	*Dodonaea viscosa*	Hop bush	Indigenous	1.5-3 m	1-2 m	200 mm	3	
ENCtom	*Enchylaena tomentosa*	Ruby saltbush	Indigenous	1 m	1 m	200 mm	5	
GREjun	*Grevillea juniperina*	Prickly spider flower	Indigenous	0.25-1 m	1-3 m	200 mm	5	
HIBasp	*Hibbertia aspera*	Rough guinea flower	Indigenous	0.3 m	1 m	200 mm	5	
KUNamb	*Kunzea ambigua*	Tick bush	Indigenous	1-3 m	1-3 m	200 mm	3	
LEPpol	*Leptospermum polygalifolium*	Tantoon	Indigenous	1-4 m	1-3 m	200 mm	3	
MELnod	*Melaleuca nodosa*	Prickly-leaved paperbark	Indigenous	1-4 m	1-3 m	200 mm	3	
MELthy	*Melaleuca thymifolia*	Honey myrtle	Indigenous	1-1.2 m	1-1.2 m	200 mm	5	
OZOdio	*Ozothamnus diosmifolius*	Rice flower	Indigenous	0.5-1.5 m	0.5-1 m	200 mm	5	
PHIwin	*Philotheca myoporoides*	Long-leaf wax flower	Indigenous	0.8 m	0.8 m	200 mm	5	
PIMlin	*Pimelea linifolia*	Slender rice flower	Indigenous	0.5-1 m	0.5-1 m	200 mm	5	
Grasses and strappy leaf plants								
DIAlon	*Dianella longifolia*	Blue flax lily	Indigenous	0.6-1 m	0.3-0.6 m	140 mm	9	
DICmac	*Dichelachne micrantha*	Shorthair plumegrass	Indigenous	0.3-1.2 m	0.3 m	140 mm	9	
JUNusi	*Juncus usitatus*	Common rush	Indigenous	0.4-1.1 m	0.3-0.5 m	140 mm	9	
LOMver	*Lomandra longifolia 'verday'*	Verday	Native	0.5-0.6 m	0.8-1 m	140 mm	9	
MICsti	*Microlaena stipoides var. stipoides*	Weeping grass	Indigenous	0.7 m	0.3-0.6 m	140 mm	9	
POAlab	*Poa labillardierei var. labillardierei*	Tussock grass	Indigenous	1.2 m	0.6-0.7 m	140 mm	9	
THEtri	*Themeda triandra* syn. *Themeda australis*	Kangaroo grass	Indigenous	up to 1.2 m	0.5-1 m	140 mm	9	
Ground covers and scramblers								
AJUaus	*Ajuga australis*	Austral bugle	Indigenous	0.5 m	0.5-1 m	140 mm	6	
ARTmil	*Arthropodium milleflorum*	Vanilla lily	Indigenous	0.3-1 m	0.3 m	140 mm	6	
BILsca	*Billardiera scandens*	Apple berry	Indigenous	0.3 m scrambler	0.5-3 m	140 mm	6	
CHRapi	*Chrysocephalum apiculatum*	Yellow buttons	Indigenous	0.15 m	0.3-0.6 m	140 mm	6	
DICrep	*Dichondra repens*	Kidney weed	Indigenous	0.1 m	0.5-1 m	140 mm	9	
GRElan	*Grevillea lanigera 'Mt. Tamboritha'*	Mt. Tamboritha	Native	0.3-0.5 m	0.6-1.5 m	140 mm	6	
HARvio	*Hardenbergia violacea*	Purple sarsaparilla	Indigenous	0.3 m	1-3 m	140 mm	6	
PELstr	*Pelargonium striatellum*	Edna Walling pop up	Native	0.15 m	0.9 m	140 mm	6	
PLEpar	*Plectranthus parviflorus*	Cockspur flower	Indigenous	0.1-0.7 m	0.2-0.5 m	140 mm	6	
SCAaem	*Scaevola aemula*	Fairy fan-flower	Indigenous	0.3-0.6 m	0.5-1 m	140 mm	6	
STYgla	*Stypandra glauca*	Nodding blue lily	Indigenous	0.3-1 m	0.4-0.5 m	140 mm	6	
VIOhed	*Viola hederacea*	Native violet	Indigenous	0.1 m	0.6-1 m	140 mm	9	
WAHstr	*Wahlenbergia stricta*	Australian bluebell	Indigenous	0.1-0.9 m	0.5 m	140 mm	9	

6.5 Climate zone 7 – indicative plant species



The climate in places such as Snowy Valleys, Lithgow, Armidale, Tumut, Goulburn, Orange is cool temperate.

Plant species suitable for this zone

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m²	Tree size
Trees								
EUCcin	*Eucalyptus cinerea*	Argyle apple	Indigenous	10-15 m	15 m	75 L	n/a	Large
EUCman	*Eucalyptus mannifera*	Spotted gum	Indigenous	up to 20 m	12-15 m	75 L	n/a	Large
EUCros	*Eucalyptus rossii*	Inland scribbly gum	Indigenous	15-18 m	15 m	75 L	n/a	Large
LAGind	*Lagerstroemia indica 'Sioux'*	Crepe myrtle	Indigenous	18 m	12 m	75 L	n/a	Large
KOEpan	*Koelreuteria paniculata*	Golden rain tree	Native	5 m	4 m	75 L	n/a	Small
ZELse	*Zelkova serrata*	Japanese zelkova	Exotic	12-15 m	10-12 m	75 L	n/a	Large
Shrubs								
ACAhow	*Acacia howitii 'honey bun'*	Honey bun	Native	1-1.2 m	1-1.2 m	200 mm	5	
BURspi	*Bursaria spinosa*	Sweet bursaria	Indigenous	3-10 m	2-4 m	200 mm	3	
CALcit	*Callistemon citrinus*	Crimson bottlebrush	Indigenous	1-3 m	1-3 m	200 mm	3	
CALsal	*Callistemon salignus*	Willow bottlebrush	Indigenous	5-10 m	3-5 m	200 mm	1	
CALtet	*Calytrix tetragona*	Common fringe myrtle	Indigenous	1-2 m	0.6-1.5 m	200 mm	5	
CORref	*Correa reflexa*	Native fuschia	Indigenous	0.5-1.5 m	0.5-1.5 m	200 mm	5	
CROsal	*Crowea saligna*	Willow-leaved crowea	Indigenous	up to 1.5 m	0.5-1 m	200 mm	5	
GREjun	*Grevillea juniperina*	Prickly spider flower	Indigenous	0.25-1 m	1-3 m	200 mm	5	
INDaus	*Indigofera australis*	Austral indigo	Indigenous	1-2 m	1-2 m	200 mm	5	
KUNpar	*Kunzea parvifolia*	Violet kunzea	Indigenous	1.2 m	1.5 m	200 mm	5	
LEPlan	*Leptospermum lanigerum*	Woolly tea-tree	Indigenous	3 m	3 m	200 mm	3	
MICcil	*Micromyrtus ciliata*	Fringed heath myrtle	Indigenous	0.5 m	0.7 m	200 mm	5	
PHEsqu	*Phebalium squamulosum*	Scaly phebalium	Indigenous	1-1.5 m	1-1.5 m	200 mm	5	
PHImyo	*Philotheca myoporoides*	Long-leaf wax flower	Indigenous	0.8 m	0.8 m	200 mm	5	
RHAaus	*Rhagodia spinescens 'Aussie flat bush'*	Aussie flat bush	Native	0.3-0.5 m	1 m	200 mm	5	
ZIEcyt	*Zieria cytisoides*	Downy zieria	Indigenous	1.5 m	1.5 m	200 mm	5	
Grasses and strappy leaf plants								
BULbul	*Bulbine bulbosa*	Bulbine lily	Indigenous	0.3-0.6 m	0.3-0.5 m	140 mm	9	
DIAlon	*Dianella longifolia*	Blue flax lily	Indigenous	0.6-1 m	0.3-0.6 m	140 mm	9	
DIArev	*Dianella revoluta*	Blueberry lily	Indigenous	0.5-0.8 m	0.3-0.6 m	140 mm	9	
FESgla	*Festuca glauca*	Blue fescue grass	Exotic	0.25 m	0.25 m	140 mm	9	
LOMhys	*Lomandra hystrix*	Green mat rush	Indigenous	0.9-1.3 m	0.9-1.3 m	140 mm	6	
MICsti	*Microlaena stipoides var. stipoides*	Weeping grass	Indigenous	0.7 m	0.3-0.6 m	140 mm	9	
PENnaf	*Pennisetum alopecuroides 'nafray'*	Nafray	Native	0.6 m	0.6 m	140 mm	9	
POAesk	*Poa labillardierei 'Eskdale'*	Eskdale	Native	1 m	0.5-0.6 m	140 mm	9	
Ground covers and scramblers								
BAEvir	*Baeckea virgata 'dwarf'*	Dwarf heath myrtle	Native	0.75 m	1 m	140 mm	6	
BRAmul	*Brachyscome multifida*	Native daisy	Indigenous	0.3 m	0.5 m	140 mm	6	
CALcit	*Calocephalus citreus*	Lemon beauty-heads	Native	0.2-0.5 m	0.3-1 m	140 mm	6	
CHRsem	*Chrysocephalum semipapposum*	Clustered everlasting	Indigenous	0.3-0.6 m	0.6 m	140 mm	6	
CRAglo	*Craspedia globosa*	Billy buttons	Native	0.5-1 m	0.3 m	140 mm	6	
GREaus	*Grevillea australis*	Alpine grevillea	Indigenous	0.25 m	0.25-0.5 m	140 mm	6	
GRElan	*Grevillea lanigera 'Mt. Tamboritha'*	Mt. Tamboritha	Native	0.3-0.5 m	0.6-1.5 m	140 mm	6	
GREpoo	*Grevillea 'poorinda royal mantle'*	Poorinda royal mantle	Native	0.3 m	1-4 m	140 mm	6	
HARvio	*Hardenbergia violacea*	Purple sarsaparilla	Indigenous	0.3 m	1-3 m	140 mm	6	
PYCglo	*Pycnosorus globosus*	Billy buttons	Native	0.5 m	1 m	140 mm	6	
VIOhed	*Viola hederacea*	Native violet	Indigenous	0.1 m	0.6-1 m	140 mm	9	

Materials handbook

The following pages outline recommendations and considerations for your landscape plan.

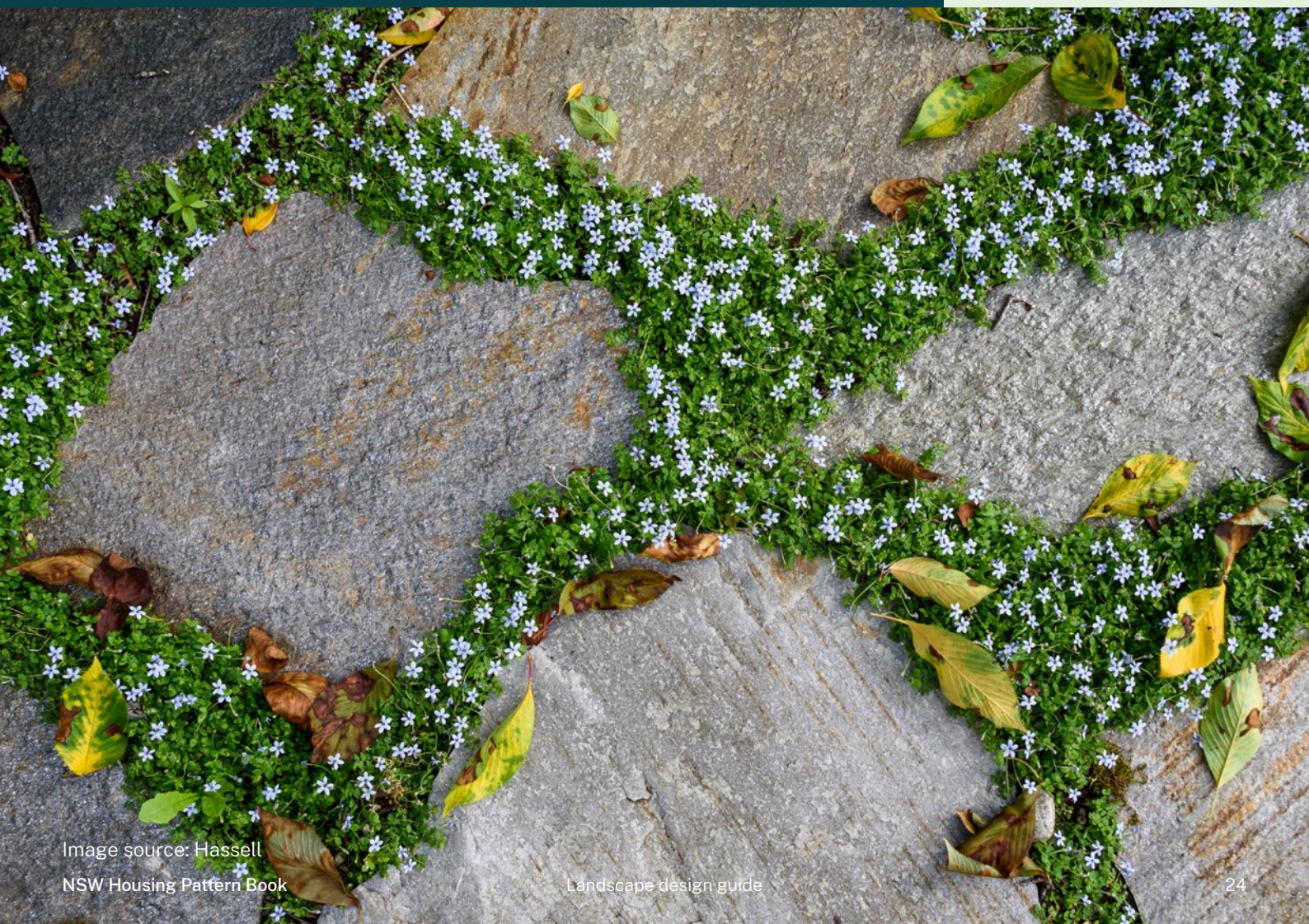


Image source: Hassell

7. Permeable paving – what it is and why it matters

What is permeable paving?

Permeable paving is a type of surface material that allows water to pass through it, rather than running off. This type of paving is designed with gaps, pores or voids that enable rainwater or other surface water to infiltrate into the ground below.

Why it matters

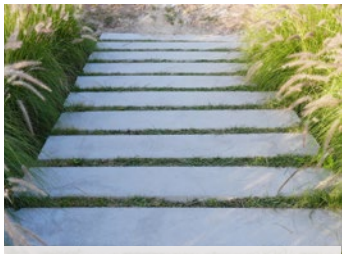
Permeable paving helps manage stormwater and reduces runoff, erosion and heat.

Permeable paving recommendations

Outdoor living areas and footpaths
Permeable paving is an ideal option for footpaths, side passages and utility areas.

- Paving can be used in combination with gravel, pebbles, turf and hardy ground cover planting. Consider the gap between pavers when installing planting.
- Consider the use of decomposed granite as a low-cost alternative to solid paving.

Examples of permeable paving in footpaths are shown below.



Concrete steppers

Natural stone steppers in gravel

Natural stone steppers in turf

Gravel and pebbles in a geogrid

Gravel

Pebbles

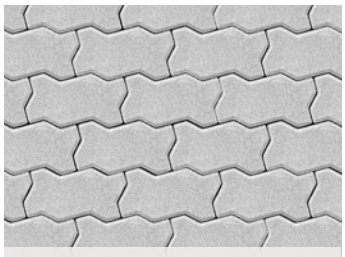
Concrete steppers in turf

Concrete steppers in planting

Driveways
Permeable paving is a functional and attractive design solution for a driveway.

- Durable and long-lasting: designed to withstand heavy use while maintaining its integrity.
- Attractive and versatile: available in a wide range of colours, patterns and designs to complement the home.
- Enhanced safety: can offer greater slip resistance than standard concrete.

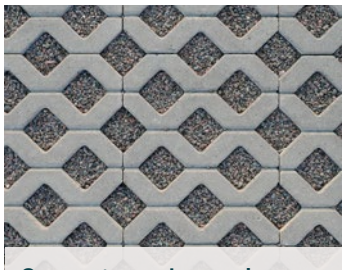
Examples of permeable driveway paving are shown below.



Permeable paver

Concrete unit paving and gravel joints

Concrete paving and planting infill



Concrete paving and gravel infill

7.1 Material recommendations

In-situ concrete

When selecting concrete:

- Use regionally sourced natural aggregates where possible.
- Use recycled aggregate for road base when preparing the ground for your driveway.
- Consider using up to 30% processed recycled concrete aggregate where suitable.

Brick paving

When selecting brick paving:

- Bricks can be laid flat or on edge depending on the desired look and available paving depth.
- Bricks can be laid with mortar joints or butt jointed with any gaps left dry or infilled with paving sand.
- Consult with your supplier and installer for installation requirements, including base preparation, laying and jointing.
- Consider using recycled bricks as a sustainable alternative to new bricks.

Precast concrete paving

When selecting concrete paving:

- Consider the use of local and regional suppliers.
- Consider the use of products that incorporate recycled aggregates.
- Consult with your supplier and installer for installation requirements, including preparation, laying and sealing.

Australian hardwood decking

When selecting timber decking:

- Decide how the deck will be used (entertaining, relaxing, dining, etc) to inform the size, layout and features.
- Apply protective sealants, oils or stains to enhance appearance, durability, stain and weather resistance.
- Build a robust frame using treated timber or steel for long-lasting support.
- Lay decking with appropriate spacing for expansion, contraction, ventilation and drainage.
- Reapply protective coatings as recommended by the product manufacturer to maintain weather resistance and appearance.
- Use sustainably sourced timber products.
- Examples of Australian hardwoods include blackbutt, jarrah, spotted gum and tallowwood.

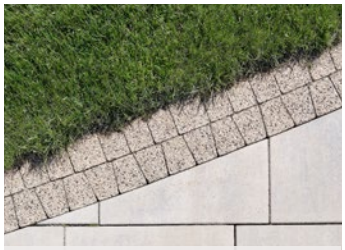
Examples of paving and decking are shown below.

In-situ concrete

Concrete with aggregate

Brick

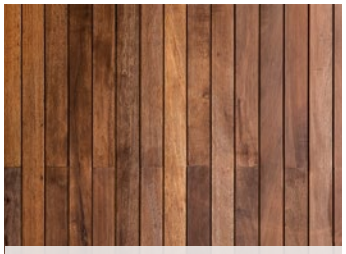
Recycled brick



Precast concrete paving

Precast concrete paving

Natural stone paving



Australian hardwood decking

7.2 Planning for and selecting lighting

Garden lighting, when integrated early in design, can extend the use and enjoyment of outdoor spaces while supporting safety, wayfinding and ambience.

Lighting should respond to planting form, architectural features and circulation, enhancing rather than overpowering the landscape. Layering and subtlety in lighting, where possible, can reveal textures, highlight key plantings, and ensure clear paths, creating spaces that feel welcoming, legible and connected to place.

Lighting considerations

- Avoid uplighting trees to minimise impacts to wildlife activities like roosting, foraging and migrating.
- Use shielded fixtures to reduce light spill.
- Use LED lights for longevity and low energy use.
- Integrate sensors (motion, daylight) and timers to automate operation.
- Pay careful attention to placement to avoid light spill into neighbouring properties or sensitive habitat areas.
- Provide lighting to service areas or outdoor kitchen and BBQ areas.
- Consider solar-powered lights for sustainability. Ensure they receive sufficient sunlight.
- Ensure all outdoor electrical work meets local standards and is installed by a licensed electrician.
- Plan ahead and consult with your electrician to conceal conduits and fixings within the landscape.

Examples of landscape and exterior lighting are shown below.

What is 'dark sky'?

Light pollution is the human-made alteration of outdoor light levels. It has harmful effects on wildlife and ecosystems, human health, energy and climate change, security, safety and night sky heritage. Dark sky refers to a series of principles for preventing and reducing light pollution. These principles save energy and money, and minimise wildlife disruption.

1. Useful: All light should have a clear purpose and consider its impact on an area, including wildlife.

2. Targeted: Direct light to fall only where it is needed by using shielding and aiming. Ensure the light beam points downward and does not spill.

3. Low level: Use the lowest light level required. Be mindful of surface conditions, and reflections into the night sky.

4. Controlled: Use controls such as timers or motion detectors to ensure lights are dimmed when possible, and turned off when not needed.

5. Warm coloured: Use warmer-colour lights where possible. Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.

Spike light

Path light

Step light

Timed/security light

Wall light

Up and down light

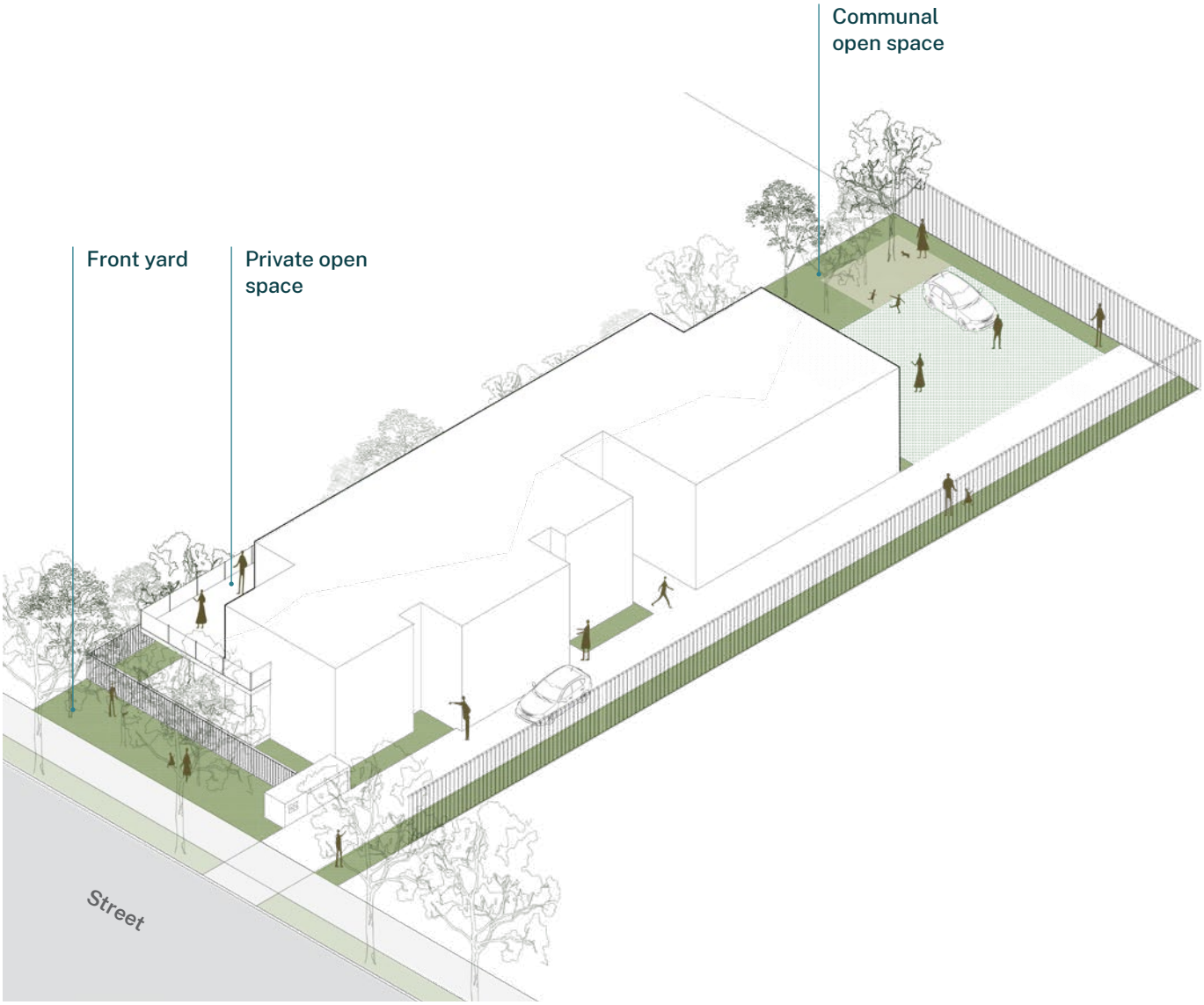
Festoon light

Low-rise design layouts

The following pages outline recommendations and considerations for your landscape plan.

Manor Homes 01
by Studio Johnston

8.
Manor home garden design layout



Incorporate amenities and infrastructure to enhance garden usability

Spaces	Access and circulation	Built elements	Amenities	Service points	Eco-friendly features
Front yard	Off-street driveway	Fences (front, side, rear and dividing)	Letterbox	Water points	Bird feeders
Communal open space	Entry footpath	Retaining walls (on sloping sites)	Clothes line (private and/or communal)	Electricity outlets	Nesting boxes
Private open space	Side passage circulation	Garden storage	Communal outdoor kitchen	Drainage points	Insect hotels
	Bicycle parking			Waste collection	Bird baths
				Rainwater tanks	Vegetable and herb gardens
				Compost bins	

Source: Hassell

8.1 Indicative landscape and planting plan

Integrate and enclose fire boosters to minimise visual impact to the streetscape

Create a diversity of outdoor living spaces connected to indoor uses

Dividing fence can include retaining walls to address level changes on sloping sites

Plant trees a minimum 750 mm from fences to allow for roots

Provide a clothes line in communal open spaces

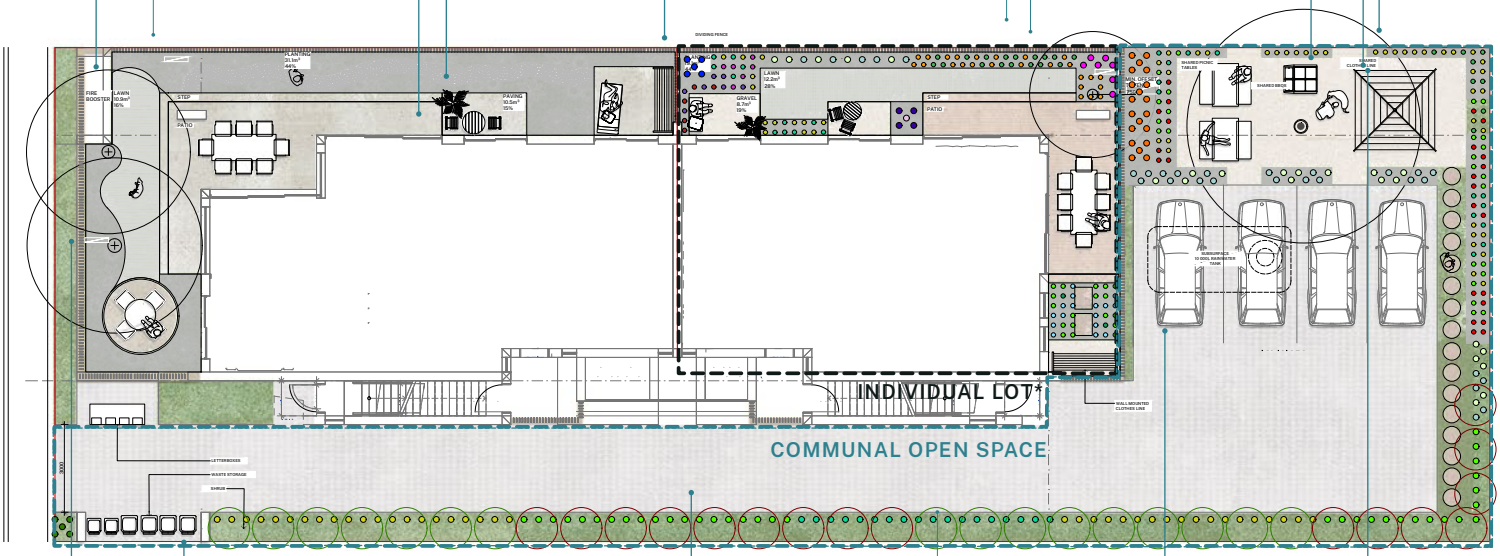
Plant trees a minimum 3 m from the home to allow for roots and canopy

Where possible, connect and consolidate canopies and soil between trees to encourage shared root systems and canopy connection

Include generous areas of planting for increased biodiversity benefits

Consider the proximity of mature trees to above-ground services and nearby structures

Consider providing an outdoor kitchen with service points to encourage neighbourly interaction



Integrate and enclose waste storage to reduce visual impact

Use permeable paving for the driveway

Make space for planting alongside paving for a more diverse and inviting outdoor space

Provide only what's needed when it comes to paving for car parking

Consider locating bird feeders and bird baths in the garden

Consider gate access for ground floor dwellings

Include front yard planting to contribute to neighbourhood character, street appeal and privacy

Colours refer to the following planting schedule

LEGEND

N

Individual lot

Communal open space

0 m 1 m 2 m 3 m 4 m 5 m

Source: Hassell

Proposed planting schedule (climate zone 2)

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m^2	Tree size
Trees								
● FLIaus	*Flindersia australis*	Crows ash	Indigenous	15-30 m	4-15 m	75 L	1	Large
○ RANfit	*Randia fitzalanii*	Native gardenia	Native	3-6 m	2-4 m	75 L	1	Medium
Shrubs								
○ ACMsub	*Acmena smithii 'sublime'*	Sublime lilly pilly	Native	3-5 m	1-3 m	300 mm	16	
● ALPcae	*Alpinia caerulea*	Native ginger	Native	1-2.5 m	1-1.5 m	200 mm	20	
● ASPaus	*Asplenium australasicum*	Birds nest fern	Indigenous	0.5-1.5 m	0.5-1.5 m	200 mm	2	
● AUScop	*Austromyrtus dulcis x tenuifolia*	Copper tops	Native	0.3-1 m	1-1.5 m	200 mm	28	
● BLEsil	*Blechnum 'silver lady'*	Silver lady fern	Exotic	0.5-1 m	0.5-1 m	200 mm	5	
● DORpal	*Doryanthes palmeri*	Spear lily	Indigenous	1.5-3 m	1.5-3 m	200 mm	1	
● HIBasp	*Hibbertia aspera*	Rough guinea flower	Indigenous	0.3 m	1 m	200 mm	22	
● HYMfla	*Hymenosporum flavum 'gold nugget'*	Dwarf native frangipani	Native	0.5-0.75 m	0.5-0.75 m	200 mm	24	
○ SYZcas	*Syzygium leuhmannii x wilsonii 'cascade'*	Cascade lilly pilly	Native	2-3 m	1-2 m	300 mm	16	
Grasses and strappy leaf plants								
● CRIped	*Crinum pedunculatum*	Swamp lily	Indigenous	1-2 m	1-2 m	140 mm	5	
● DIAcae	*Dianella caerulea*	Blue flax lily	Indigenous	0.5 m	0.5 m	140 mm	88	
● DIErob	*Dietes robinsoniana*	Lord Howe wedding lily	Native	0.6-1 m	0.6-1 m	140 mm	26	
● JUNusi	*Juncus usitatus*	Common rush	Indigenous	0.4-1.1 m	0.3-0.5 m	140 mm	21	
● LOMhys	*Lomandra hystrix*	Green mat rush	Indigenous	0.9-1.3 m	0.9-1.3 m	140 mm	43	
● NEOmar	*Neomarica gracilis*	Brazilian walking iris	Exotic	0.5-1 m	0.5-1 m	140 mm	69	
● POAesk	*Poa labillardierei 'Eskdale'*	Eskdale	Native	1 m	0.5-0.6 m	140 mm	24	
Ground covers and scramblers								
● HIBsca	*Hibbertia scandens*	Yellow guinea flower	Indigenous	0.3 m	1-2 m	140 mm	22	
● MYOins	*Myoporum insulare 'prostrate'*	Coastal boobialla	Native	0.3 m	1-1.5 m	140 mm	7	
● SCAaem	*Scaevola aemula*	Fairy fan-flower	Native	0.3-0.6 m	0.5-1 m	140 mm	6	
● VIOhed	*Viola hederacea*	Native violet	Indigenous	0.1 m	0.6-1 m	140 mm	4	

***Planting schedule relates only to individual lot and communal open space shown dashed**

8.2 Site considerations and recommendations

Indicative landscape section

Street trees are highly valuable for providing both shade and privacy to the home

Keep driveways and footpaths cool by incorporating planting

Maximise areas of planting and permeable surfaces to provide increased drainage in flood events

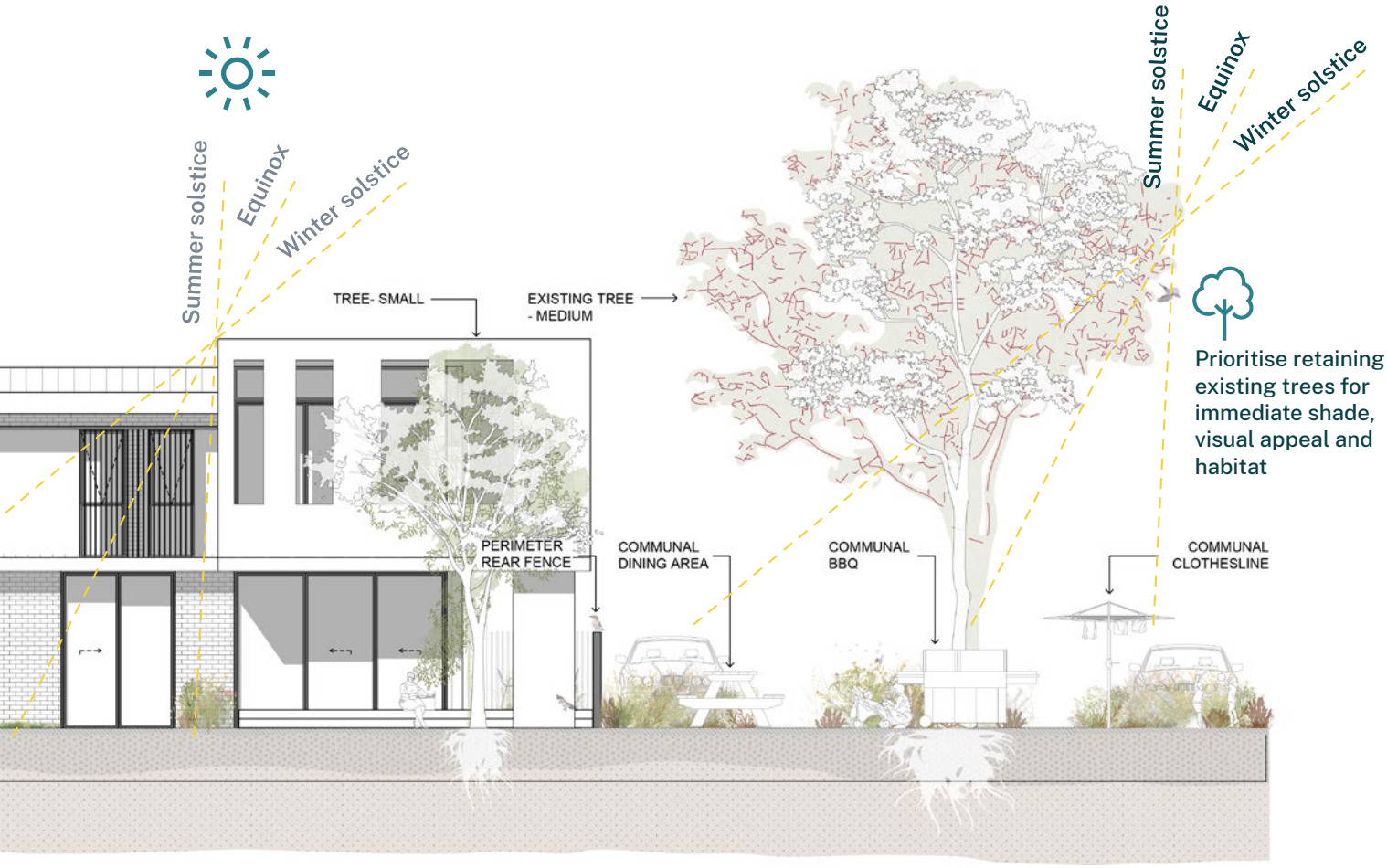
Source: Hassell

Indicative material palette
Materials reflecting urban heat

Reducing urban heat through smart material choices
Garden materials can retain heat, which can contribute to increased temperatures. Designing gardens with climate resilience in mind will ensure safety and comfort in an evolving climate.

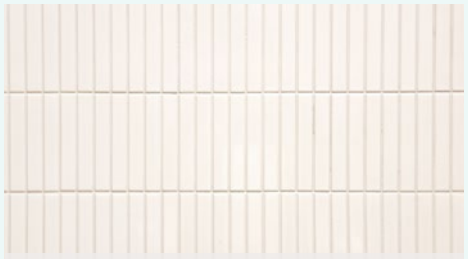
Selecting materials that minimise heat absorption can help mitigate the effects of urban heat. For example:

- using light-coloured or reflective materials for driveways and footpaths to minimise heat retention
- incorporating permeable materials that absorb water
- providing shade for built surfaces through tree shading.



1. Driveway:
Light-coloured paving

2. Car park:
Permeable brick paving in planting



3. Footpaths and patios:
Creamy-beige paving

4. Outdoor communal areas:
Light precast concrete tile

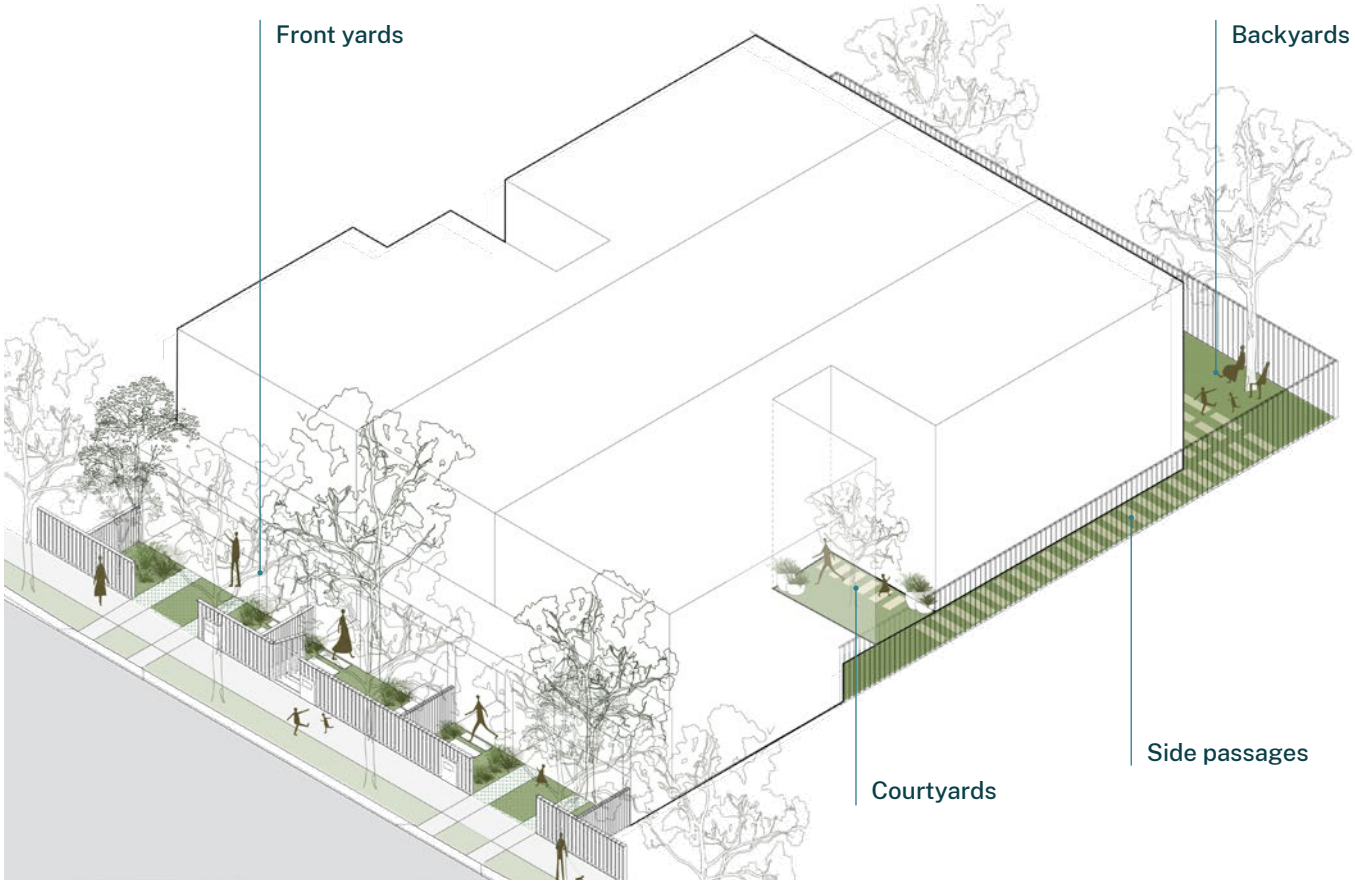
5. Rear fences:
White timber fence

6. Front fences:
Breeze blocks

All images courtesy of Hassell

Terraces 03 by Officer Woods

9. Terrace garden design layout



Incorporate amenities and infrastructure to enhance garden usability

Spaces	Access and circulation	Built elements	Amenities	Service points	Eco-friendly features
Front yard	Off-street driveway	Fences (front, side, rear and dividing)	Letterbox	Water points	Bird feeders
Courtyards (perimeter homes)	Entry footpath	Retaining walls (on sloping sites)	Clothes line	Electricity outlets	Nesting boxes
Side passages	Side passage circulation	Garden storage	Outdoor kitchen	Drainage points	Insect hotels
Backyards	Bicycle parking			Waste collection	Bird baths
				Rainwater tanks	Vegetable and herb gardens
				Compost bins	

Source: Hassell

9.1 Indicative landscape and planting plan

Include front yard planting to contribute to neighbourhood character, street appeal and privacy

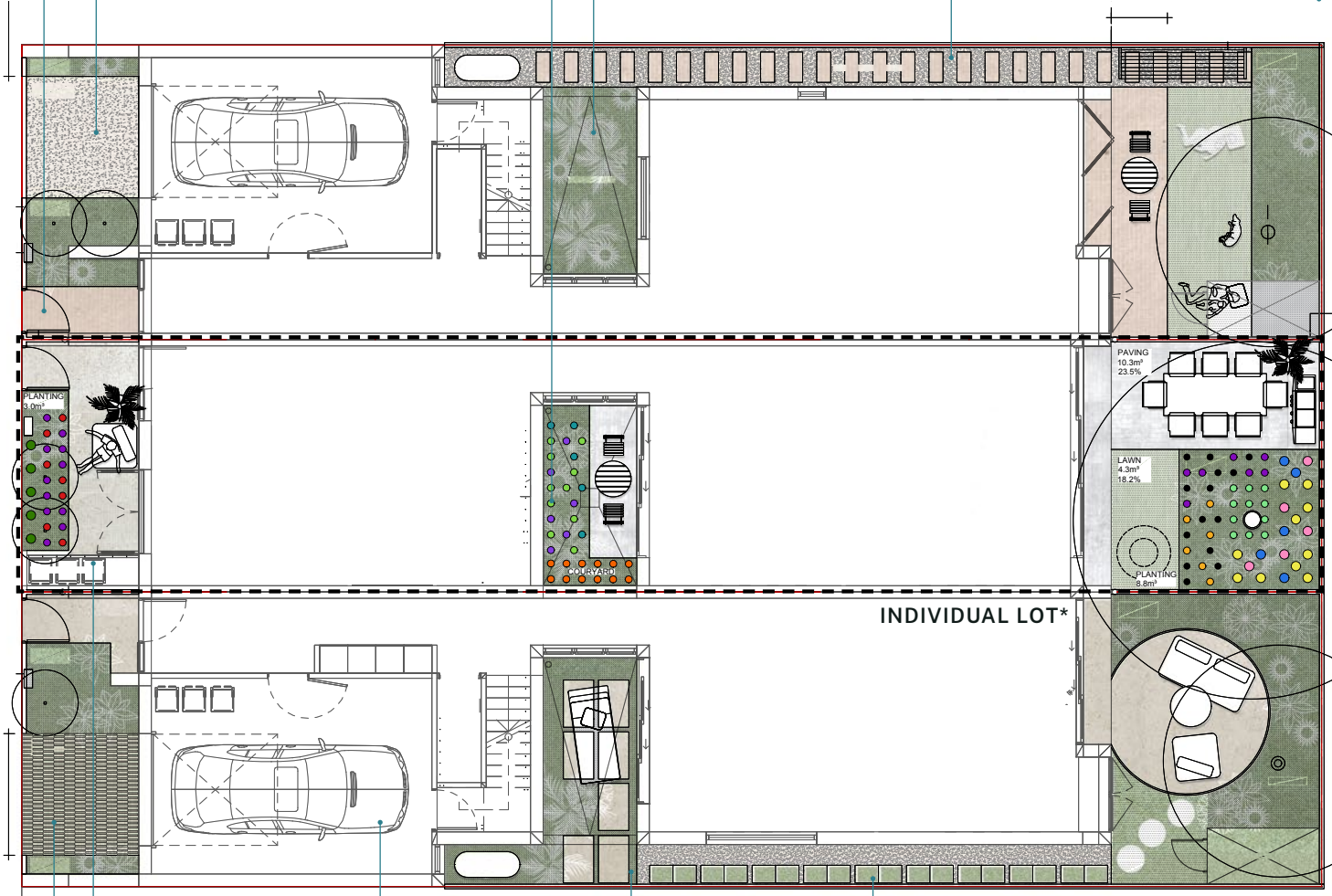
Blend paving and greenery for an inviting outdoor space that offers beauty and function

Use shade-tolerant plants in courtyards to create a lush backdrop for indoor spaces

Consider the location and access for service points such as water and drainage outlets

For eco-friendly living include a rainwater tank, vegetable garden and clothes line to side passages

Where possible, connect and consolidate canopies and soil between trees to encourage shared root systems and canopy connection



Integrate and enclose waste storage to reduce visual impact

Use permeable paving for driveway

Consider the proximity of mature trees to above-ground services and nearby structures to avoid conflicts in the future

Make space for planting alongside paving for a more diverse and inviting outdoor space

Permeable passages enable access and maintenance

Plant all trees a minimum 750 mm from fences to allow for roots

Plant trees a minimum 3 m from the home to allow space for roots and canopy

Colours refer to the following planting schedule

LEGEND

N

Individual lot

Communal open space

0 m 1 m 2 m 3 m 4 m 5 m

Source: Hassell

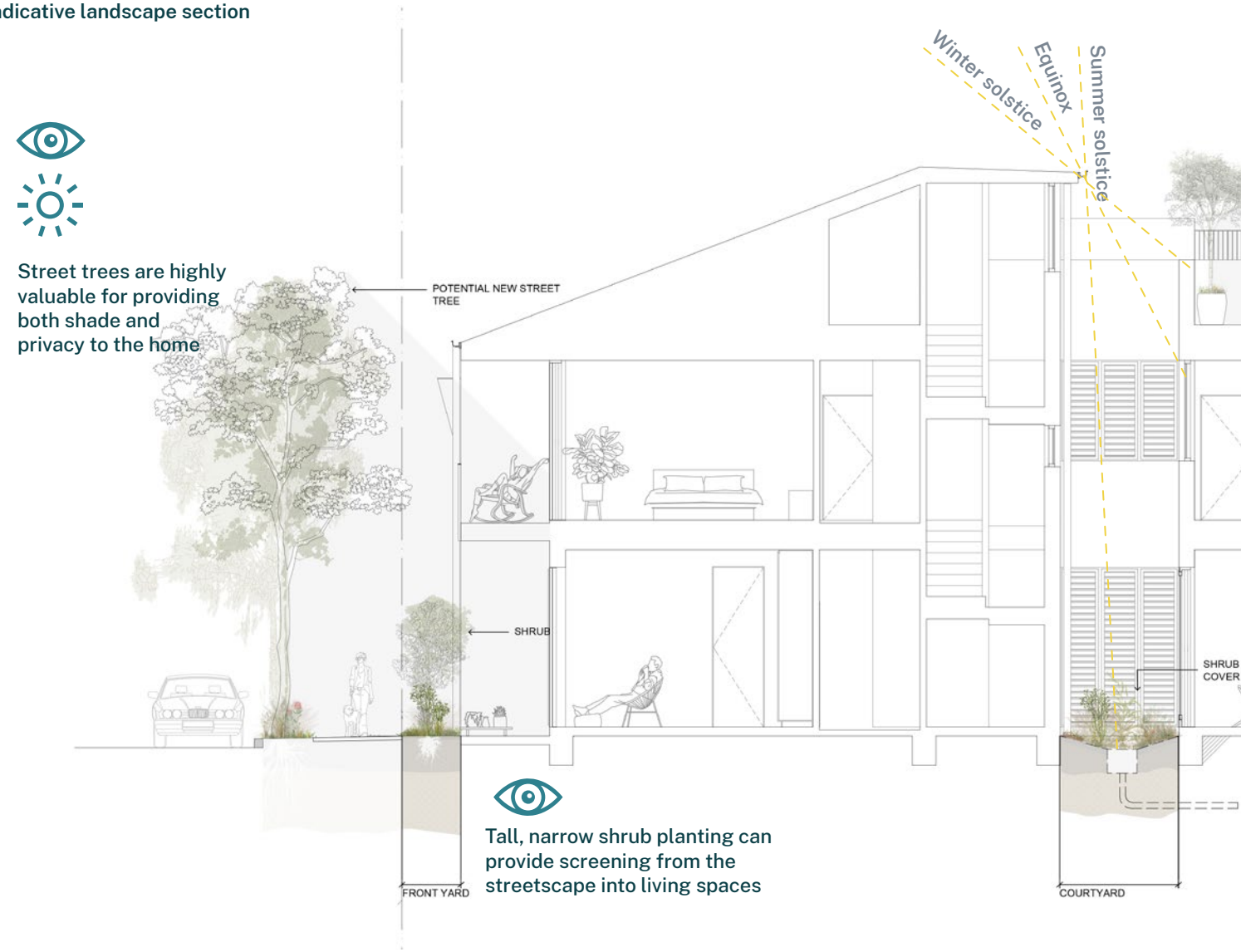
Proposed planting schedule (climate zone 5)

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m^2	Tree size
Trees								
○ CORmac	*Corymbia maculata*	Spotted gum	Indigenous	8-15 m	6-12 m	75 L	1	Large
Shrubs								
● CORalb	*Correa alba*	White correa	Indigenous	1-2 m	1-2 m	200 mm	10	
● PHEsqu	*Phebalium squamulosum*	Scaly phebalium	Indigenous	1-1.5 m	1-1.5 m	200 mm	5	
● PHIwin	*Philotheca myoporoides*	Long-leaf wax flower	Indigenous	0.8 m	0.8 m	200 mm	5	
● WESfru	*Westringia fruticosa*	Coastal rosemary	Indigenous	1-2 m	1-2 m	200 mm	5	
Grasses and strappy leaf plants								
● DIAcae	*Dianella caerulea*	Blue flax lily	Indigenous	0.5 m	0.5 m	140 mm	17	
● LOMkat	*Lomandra longifolia 'katrinus/katrinus deluxe'*	Katrinus/katrinus deluxe	Native	0.7 m	0.7-1 m	140 mm	12	
● LOMver	*Lomandra longifolia 'verday'*	Verday	Native	0.5-0.6 m	0.8-1 m	140 mm	10	
● PENnaf	*Pennisetum alopecuroides 'nafray'*	Nafray	Native	140 mm	140 mm	140 mm	7	
Ground covers and scramblers								
● DICrep	*Dichondra repens*	Kidney weed	Indigenous	0.1 m	0.5-1 m	140 mm	5	
● GOOpro	*Goodenia ovata 'prostrate'*	Prostrate hop goodenia	Native	0.3 m	0.6-1 m	140 mm	11	
● HIBsca	*Hibbertia scandens*	Yellow guinea flower	Indigenous	0.3 m	1-2 m	140 mm	6	
● PELaus	*Pelargonium australe*	Coastal geranium	Indigenous	0.4 m	0.3-0.6 m	140 mm	6	
● VIOhed	*Viola hederacea*	Native violet	Indigenous	0.1 m	0.6-1 m	140 mm	14	

***Planting schedule relates only to individual lot shown dashed**

9.2 Site considerations and recommendations

Indicative landscape section



Source: Hassell

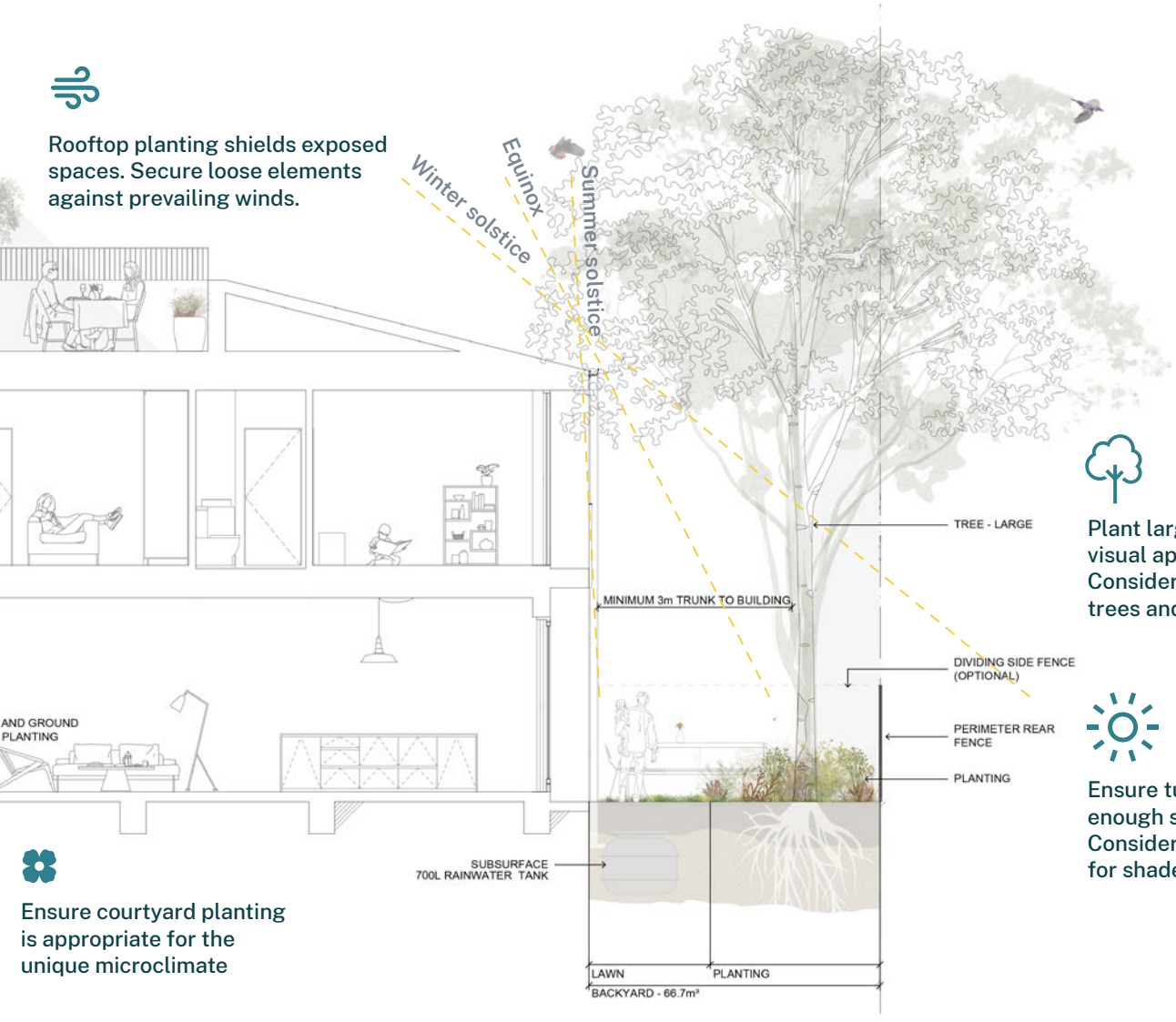
Indicative material palette
Prioritising permeable surfaces

Managing stormwater in home gardens
On small sites, it is possible to provide a high-level of ground permeability without compromising the flexibility and functionality of outdoor spaces.

There are several benefits to permeable paving, including:

- Reduced stormwater runoff reduces the strain on drainage systems and potential flooding.
- By allowing water to reach the roots of nearby plants, permeable paving can passively irrigate planting.
- Permeable paving has the potential to reduce the amount of stormwater infrastructure and associated costs.
- By allowing water to evaporate from the surface, permeable paving can help cool the garden.

Rooftop planting shields exposed spaces. Secure loose elements against prevailing winds.



Plant large trees for shade, visual appeal and habitat
Consider the mature size of trees and adjoining built form

Ensure turf areas receive enough sunlight to thrive
Consider alternative plantings for shaded spots

Ensure courtyard planting is appropriate for the unique microclimate

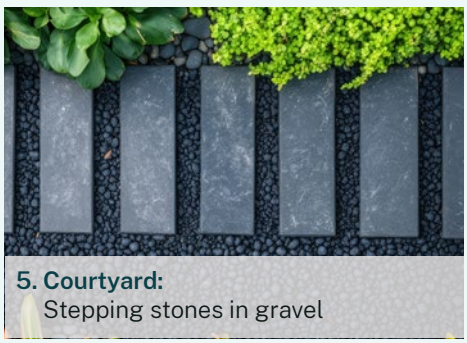
0 m 1 m 2 m 3 m 4 m 5 m

1. Driveway:
Permeable paving and planting

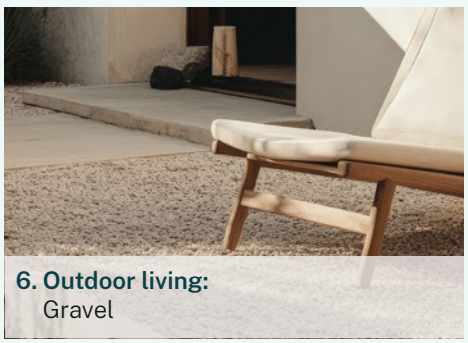
2. Driveway:
Permeable paving and gravel

3. Footpaths and living areas:
Permeable paving

4. Footpaths:
Pebble edges to footpaths



5. Courtyard:
Stepping stones in gravel

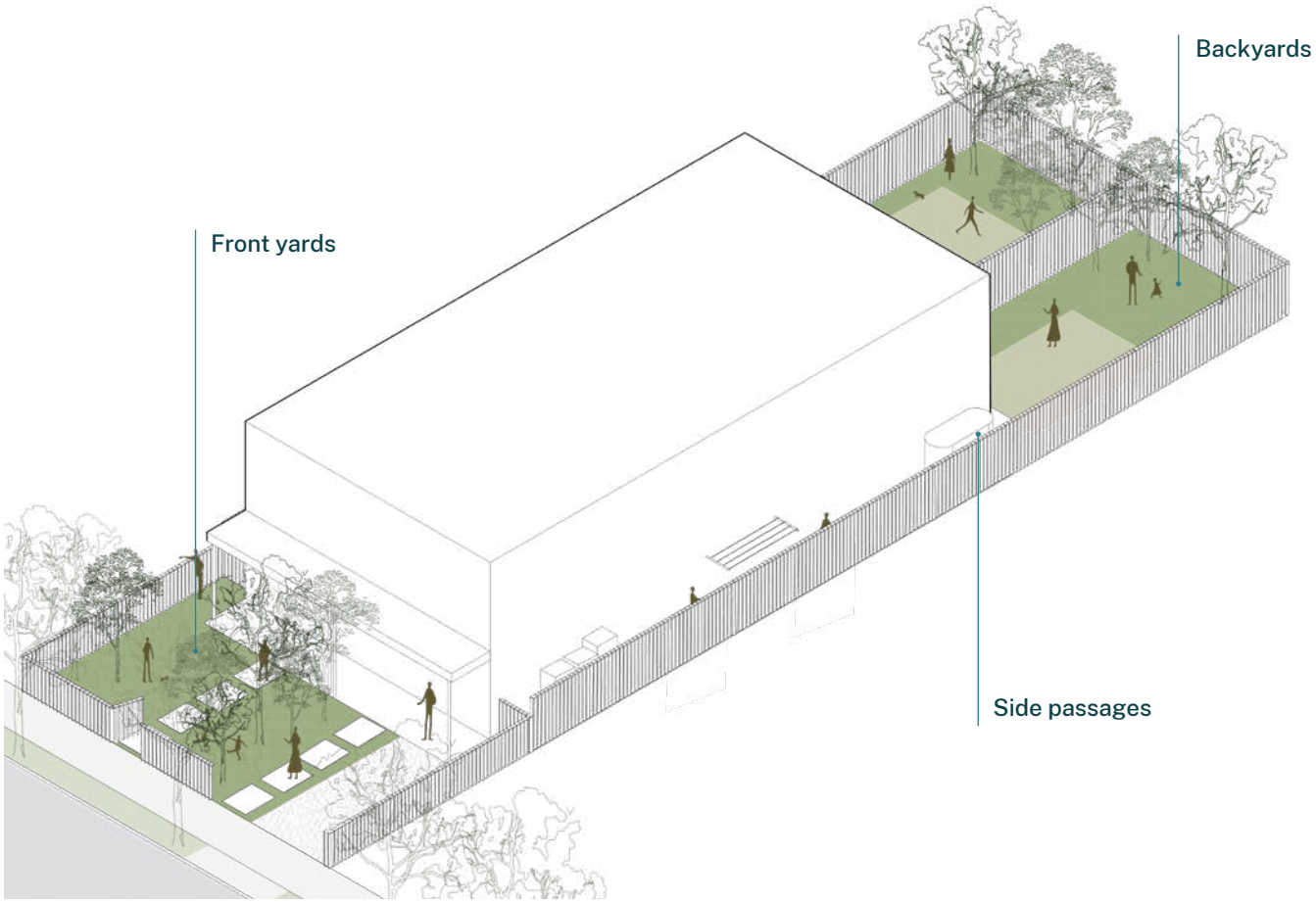


6. Outdoor living:
Gravel

All images courtesy of Hassell

Semis 01 by Anthony Gill Architects

10.
Semi-detached garden design layout



Incorporate amenities and infrastructure to enhance garden usability

Spaces	Access and circulation	Built elements	Amenities	Service points	Eco-friendly features
Front yard	Off-street driveway	Fences (front, side, rear and dividing)	Letterbox	Water points	Bird feeders
Side passages	Entry footpath	Retaining walls (on sloping sites)	Clothes line	Electricity outlets	Nesting boxes
Backyards	Side passage circulation	Garden storage	Outdoor kitchen	Drainage points	Insect hotels
	Bicycle parking			Waste collection	Bird baths
				Rainwater tanks	Vegetable and herb gardens
				Compost bins	

Source: Hassell

10.1 Indicative landscape and planting plan

Front yard planting contributes to the neighbourhood character, adds street appeal to the residence, and provides privacy

Shrub planting along boundaries provides visual screening and privacy

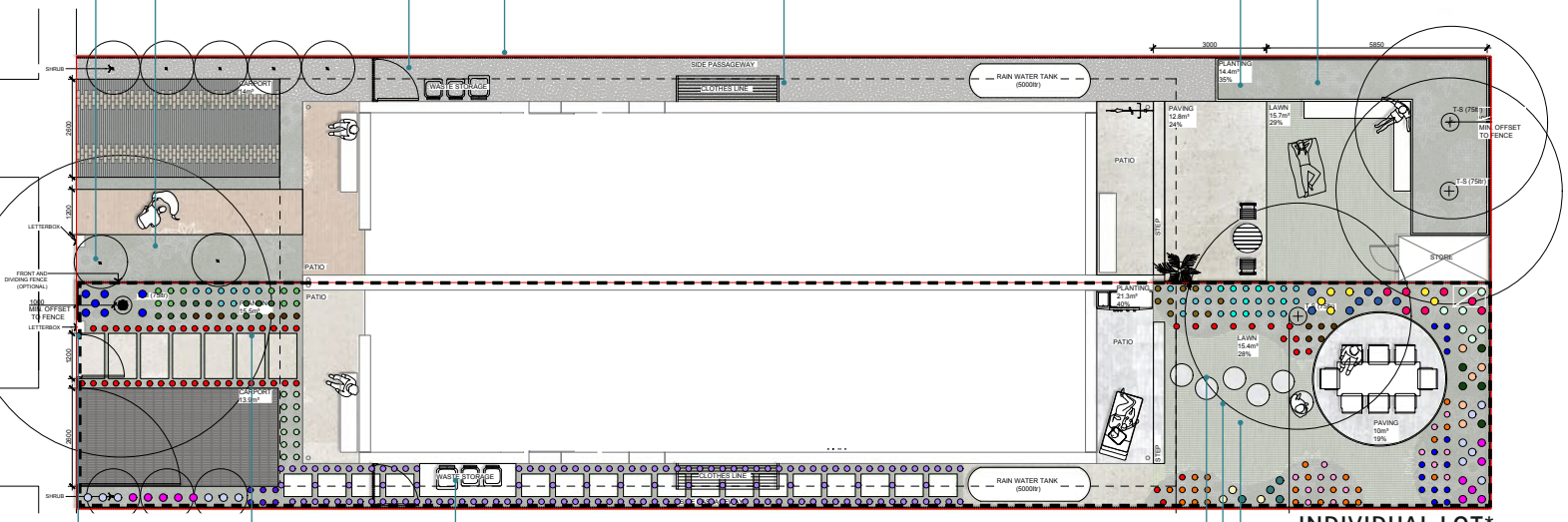
Include generous areas of planting for increased biodiversity benefits

Plant all trees a minimum 750 mm from fences to allow for roots

Consider the location and access for service points such as water and drainage outlets

Permeable surfaces for passages enables access and maintenance

Planter walls can be used to negotiate level changes on sloping sites



Integrate letterboxes into fencing where possible

Use permeable paving for driveways

Allow for waste storage in side passages

Consider using permeable paving in outdoor living spaces over typical impermeable surfaces

Where possible, connect and consolidate canopies and soil between trees to encourage shared root systems and canopy connection

Locate trees to maximise shade to the garden and the home

Plant trees a minimum 3 m from the home to allow space for roots and canopy

Colours refer to the following planting schedule

LEGEND

N

Individual lot

0 m 1 m 2 m 3 m 4 m

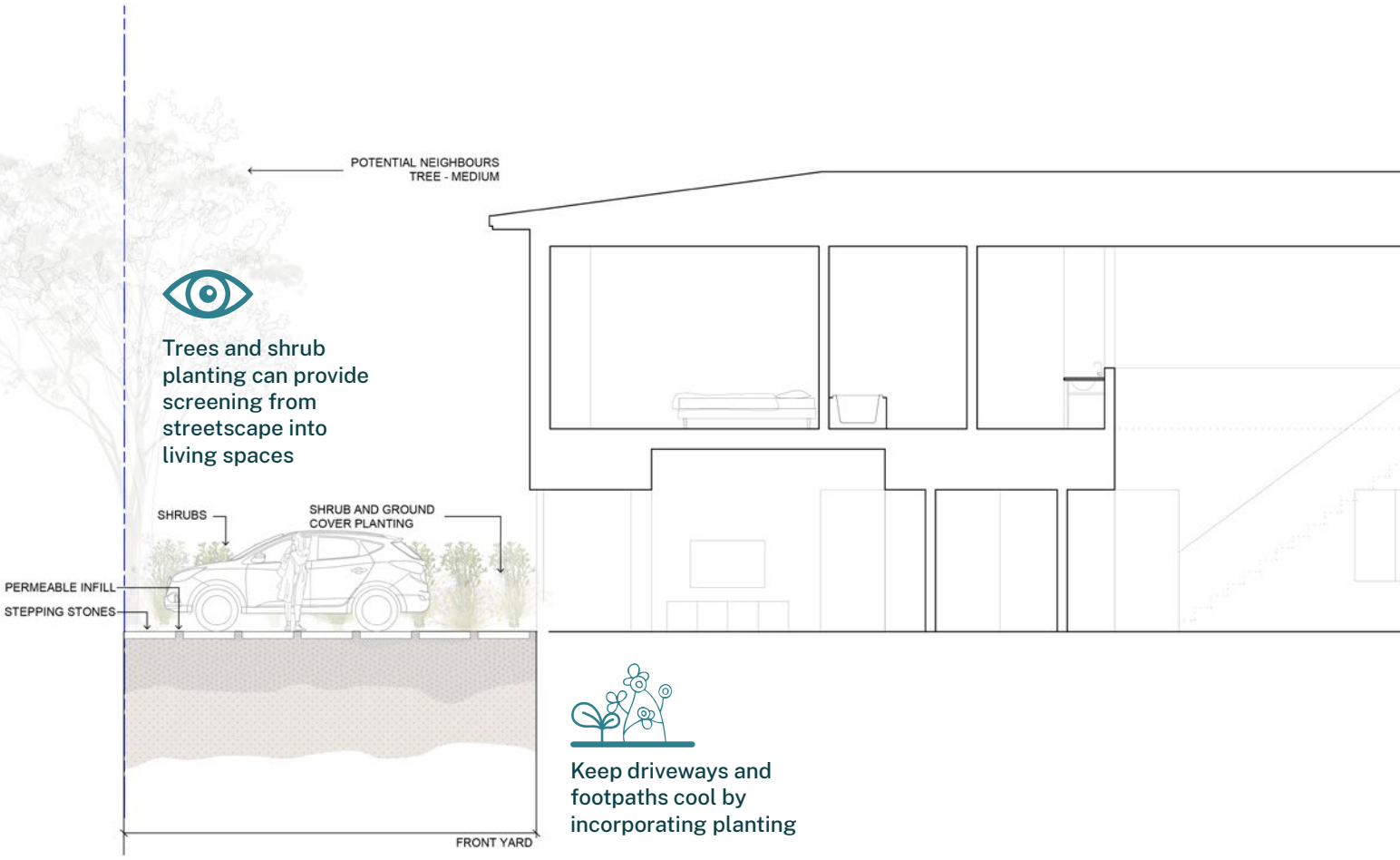
Source: Hassell

Proposed planting schedule (climate zone 6)

Code	Botanical name	Common name	Provenance	Mature height	Mature spread	Typical pot size	Density /per m^2	Tree size
Trees								
ANGflo	*Angophora floribunda*	Rough-barked apple	Indigenous	10-20 m	6-20 m	75 L	1	Large
MELlin	*Melaleuca linariifolia*	Snow-in-summer	Indigenous	4-10 m	4-6 m	75 L	1	Medium
Shrubs								
CALgre	*Callistemon salignus 'great balls of fire'*	Great balls of fire bottlebrush	Native	1-3 m	1-3 m	200 mm	7	
CASgre	*Casuarina glauca 'green wave'*	Green wave	Native	1.5-2 m	1.5-2 m	200 mm	5	
CORref	*Correa reflexa*	Native fuschia	Indigenous	0.5-1.5 m	0.5-1.5 m	200 mm	7	
DODvis	*Dodonaea viscosa*	Hop bush	Indigenous	1.5-3 m	1-2 m	200 mm	11	
ENCtom	*Enchylaena tomentosa*	Ruby saltbush	Indigenous	1 m	1 m	200 mm	7	
GREjun	*Grevillea juniperina*	Prickly spider flower	Indigenous	0.25-1 m	1-3 m	200 mm	5	
HIBasp	*Hibbertia aspera*	Rough guinea flower	Indigenous	0.3 m	1 m	200 mm	6	
MELthy	*Melaleuca thymifolia*	Honey myrtle	Indigenous	1-1.2 m	1-1.2 m	200 mm	3	
OZOdio	*Ozothamnus diosmifolius*	Rice flower	Indigenous	0.5-1.5 m	0.5-1 m	200 mm	12	
PHIwin	*Philotheca myoporoides*	Long-leaf wax flower	Indigenous	0.8 m	0.8 m	200 mm	4	
Grasses and strappy leaf plants								
DIAlon	*Dianella longifolia*	Blue flax lily	Indigenous	0.6-1 m	0.3-0.6 m	140 mm	15	
DICmac	*Dichelachne micrantha*	Shorthair plumegrass	Indigenous	0.3-1.2 m	0.3 m	140 mm	15	
JUNusi	*Juncus usitatus*	Common rush	Indigenous	0.4-1.1 m	0.3-0.5 m	140 mm	9	
LOMver	*Lomandra longifolia 'verday'*	Verday	Native	0.5-0.6 m	0.8-1 m	140 mm	24	
LOMlim	*Lomandra longifolia x confertifolia 'lime tuff'*	Lime tuff	Native	0.5-0.8 m	0.5-0.8 m	140 mm	12	
POAlab	*Poa labillardierei var. labillardierei*	Tussock grass	Indigenous	1.2 m	0.6-0.7 m	140 mm	20	
THEtri	*Themeda triandra syn. Themeda australis*	Kangaroo grass	Indigenous	up to 1.2 m	0.5-1 m	140 mm	17	
Ground covers and scramblers								
CHRapi	*Chrysocephalum apiculatum*	Yellow buttons	Indigenous	0.15 m	0.3-0.6 m	140 mm	12	
DICrep	*Dichondra repens*	Kidney weed	Indigenous	0.1 m	0.5-1 m	140 mm	131	
GRElan	*Grevillea lanigera 'Mt. Tamboritha'*	Mt. Tamboritha	Native	0.3-0.5 m	0.6-1.5 m	140 mm	10	
SCAaem	*Scaevola aemula*	Fairy fan-flower	Indigenous	0.3-0.6 m	0.5-1 m	140 mm	11	
VIOhed	*Viola hederacea*	Native violet	Indigenous	0.1 m	0.6-1 m	140 mm	14	

***Planting schedule only relates to individual lot shown dashed**

10.2 Indicative landscape section



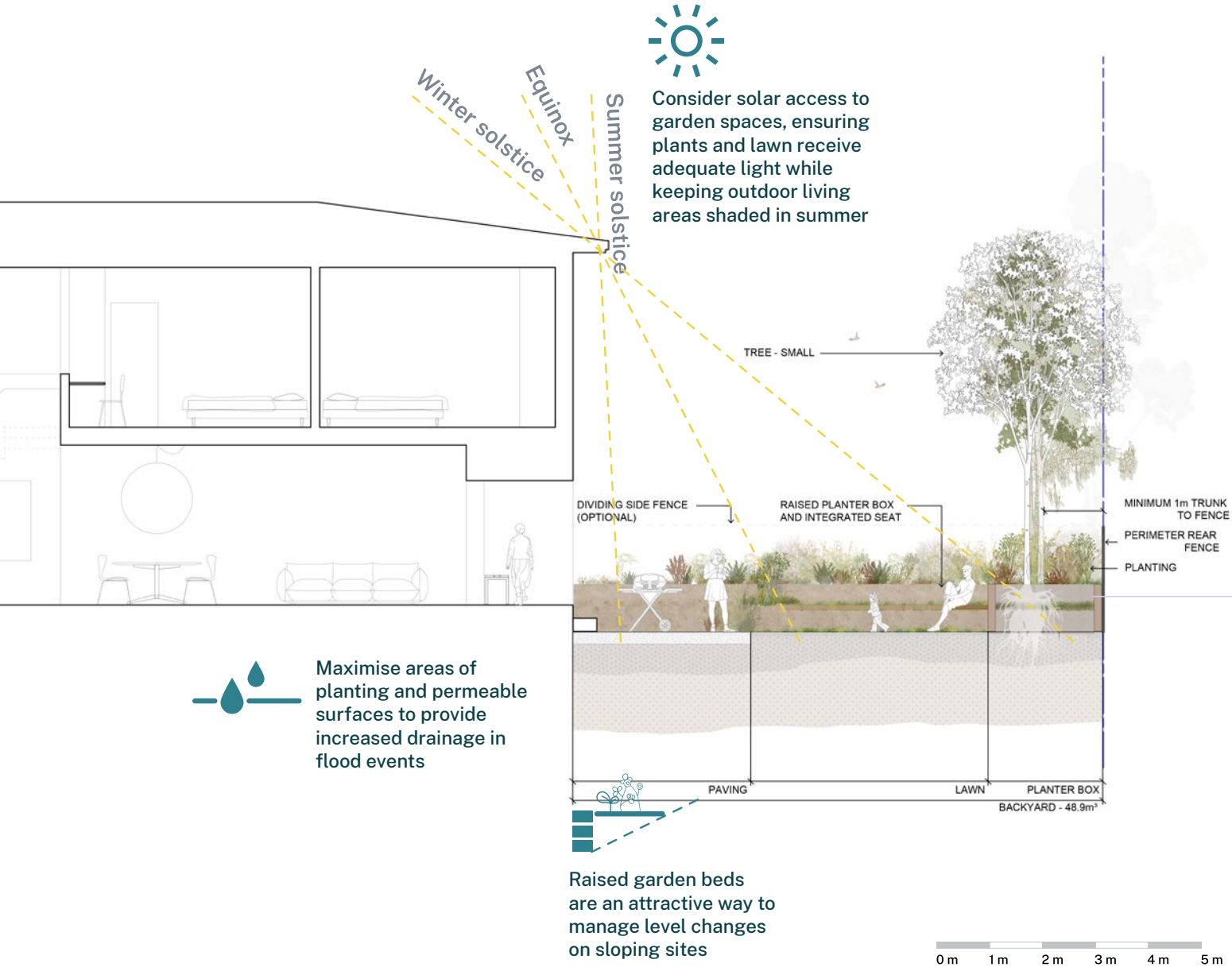
Source: Hassell

Indicative material palette
Materials responsive to Sydney sandstone

Designing with place: local materials in garden design
Designing a garden that incorporates the materials of place enhances its sense of connection, sustainability and character.

In Sydney using locally sourced sandstone is a prime example of this approach. Sydney sandstone, with its warm golden hues and distinctive layered texture, is a defining feature of the region's natural landscape and built environment.

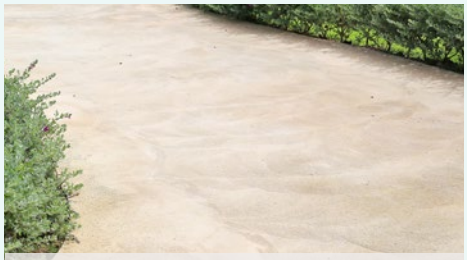
Also, using local materials reduces environmental impact by reducing transport emissions. A thoughtfully designed garden that embraces the materials of its place fosters a deeper appreciation for the local environment while creating a timeless and cohesive outdoor space.



Consider solar access to garden spaces, ensuring plants and lawn receive adequate light while keeping outdoor living areas shaded in summer

Maximise areas of planting and permeable surfaces to provide increased drainage in flood events

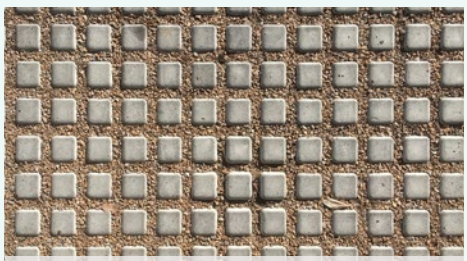
Raised garden beds are an attractive way to manage level changes on sloping sites



1. Driveway: In-situ concrete paving

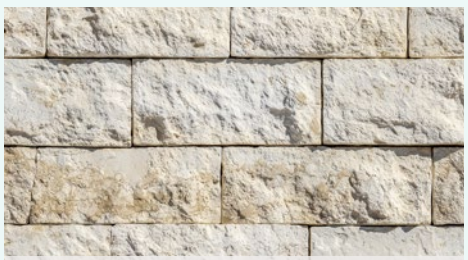
2. Footpaths and patios: Stone paving

3. Footpaths and patios: Concrete paving



4. Patios: Permeable paving and gravel

5. Patios: Sandstone paving



6. Front fences: Low sandstone walls

All images courtesy of Hassell

NSW GOVERNMENT

Terraces 04 by Other Architects x NMBW

GOVERNMENT ARCHITECT NEW SOUTH WALES