

Department of Communities

LANDSCAPING DESIGN BRIEF

**Landscaping Design Guidelines for Single and Grouped Dwellings
2020**

REV. DATE	COMMENTS

Table of Contents

Preface	p. 4
1. Trees	p. 6
2. Planting Typologies, Deep Soil Areas, Dimensions and Paving	p. 7
3. Maintenance and Watering	p. 8
4. Landscaping Strategies	
<i>LS.1 Common Driveway and Parking Bays</i>	p. 9
<i>LS.2 Public Domain</i>	p.11
<i>LS3. Dwellings</i>	p.13
5. Species Selection Guide	
<i>SSG 5.1 Productive Plants</i>	p.15
<i>SSG 5.2 Vertical Screening Plants</i>	p.17
<i>SSG 5.3 Dwelling Shade Trees</i>	p.19
<i>SSG5.4 Broad Shade Tree</i>	p.20
<i>SSG5.5 Small Ornamental Trees</i>	p.21
<i>SSG5.6 Bird and Insect Attracting Plants</i>	p.22
<i>SSG5.7 Additional Shrubs and Ground Covers</i>	p.24
<i>SSG5.8 Climbing plants</i>	p.28
<i>SSG5.9 Cascading Plants</i>	p.29
<i>SSG5.10 Ground Covers</i>	p.31
<i>SSG5.11 Endemic Plants</i>	p.32
Appendix A Definitions	
<i>D1. Tree Canopy Coverage</i>	p.33
Appendix B	
<i>Landscaping Plan Submission Criteria</i>	p.34
<i>Example of landscape DA submission</i>	p.35

Preface

Introduction

This Landscaping Design Brief has been developed by the Western Australian Department of Communities, Housing for landscaping works on Single and Grouped housing projects delivered by the Department of Communities, Housing. This Landscaping Design brief outlines requirements and suggested design practices for the landscape design of Single and Grouped housing projects.

The Landscaping Design Brief is to be read in conjunction with:

- > *Landscaping Technical Brief* and/or *Landscaping Technical Brief for Design and Construct Projects* as relevant to the project
- > the *Landscaping Specification* documents

As well as all the relevant planning policies, including:

- > Local Government Authority policies relating to tree preservation and landscaping.
- > SPP 7.3 Residential Design Codes Volume 1.

Please also note this document references terminology and dimensions contained in SPP 7.3 Residential Design Codes Volume 2 – Apartments to provide tree planting guidance for residential settings.

All advice herein is intended as a guide only to assist the design of landscaping on development sites. A person or agency suitably qualified in landscape design and/or arboriculture should be consulted where relevant on projects to ensure the landscape design thrives and does not present a danger to structures and services nearby.

How to use

This document contains four (4) main section and two (2) appendices.

Sections **1. Trees**, **2. Planting** and **3. Maintenance and Watering** identify the main objectives of this brief. They outline design requirements as well as identify relevant design guidelines that can be implemented to satisfy both the requirements (mandatory) and desirable outcomes described in this document.

The diagrams and tables in section **4. Landscape Strategies** provide suggestions on how to design landscaping to improve different areas of a development site and create attractive dwellings and neighbourhoods. This section identifies three (3) main areas: common driveway and parking bays, the public domain, and dwellings. For each section, a table describing landscaping strategies and relevant plant categories appropriate for the landscaping of each area is provided. Suggested plant species for each plant category are identified in section **5. Plant Selection Guide**. Other species that meet the objective of each plant category may also be used.

The two (2) appendices are: Appendix **A. Definitions** and Appendix **B. Landscaping Plan Submission Criteria**.

Reference documents

- > Western Australian Organism List – Department of Primary Industries and Regional Development –
A database to identify plants that are prohibited under the Biosecurity and Agriculture Management Act 2007

Useful Resources

- > Waterwise Plant Selection feature - Water Corporation Website
Plants should have a favourable Waterwise rating, with an exception made for plants in the 'Productive' category.
- > Select the Right Tree brochure – Water Corporation Website
Guidelines on how far to locate specific tree species from sewer lines.
- > Suburb Selector - Apace Nursery Website
Suburb selector provides a site-specific endemic plant list for the Perth region.

Useful Abbreviations

Department of Communities, Housing (Communities)

Local Government Authority (LGA)

Deep Soil Area (DSA)

Rootable Soil Zone (RSZ)

Tree Canopy Coverage (TCC)

Urban Tree Canopy Coverage (UTCC)

1. Trees

Objectives

O.1

Increase the number of trees and shading areas on development sites to reduce the urban heat island effect and meet Local Government Urban Tree Canopy Coverage targets.

O.2

Provide shaded and attractive streets within neighbourhoods to encourage walking and cycling.

Design Requirements

DR.1

A minimum of three 45L trees must be provided for each dwelling on a development site.

Note: Some development sites may require more trees to meet Design Guideline 1a.

DG.1 Design Guidelines

- a** Tree selection, number, and planting location should be designed to provide a tree canopy that will cover a minimum 20% of the development site when mature¹ (Tree Canopy Coverage, TCC²). Where an LGA has nominated an Urban Tree Canopy Coverage target for the locality, the higher of the TCC targets should be met.
- b** All trees planted on the development site and associated verge areas must have a minimum 45L bag size and a minimum height of 1.5m at time of planting. Always consult relevant LGA landscaping policies to make sure any additional and/or alternative requirements are met.
- c** Where a tree in a bag larger than 45L is required by an LGA or other relevant authority, one tree in a 90L bag will be accepted as a substitute for three 45L trees.
- d** Where the development verge does not have existing trees, new trees should be planted to provide shading to pedestrian footpaths and roads. Always consult with LGA with regards to their planting requirements.

¹ Size at maturity should be nominated by a knowledgeable source such as a plant nursery.

² Please refer to Appendix A for definition and guidance on calculating tree canopy cover.

2. Planting

Typologies, Deep Soil Areas, Dimensions and Paving

Objectives

O.3

To support local ecology and biodiversity through endemic and bird/insect attracting species.

O.4

To ensure trees are planted in appropriate Deep Soil Areas and suitable distances from built structures so they will provide large canopies at maturity.

Design Requirements

DR.2

Each development must provide a variety of species nominated in the Species Selection Guide (or suitable alternatives) which must include endemic plants as well as bird and insect attracting species.

DR.3

The following are not permitted as part of the landscaping on development sites:

- > Use of species listed on the Western Australian Organism List (WAOL) database declared 'pest (S22)' or 'pest prohibited (s12)' under the Biosecurity and Agriculture Management Act 2007 (BAM Act).
- > Synthetic turf.

DG.2 Design Guidelines

- a** All trees planted on site should be within required Deep Soil Areas to ensure healthy growth as set out in Design WA, State Planning policy 7.3.2.
- b** Wherever possible, the distance between the tree trunk and roofline or wall of dwelling should be large enough so that the tree does not grow into or above the roof or wall when it achieves full height and width. Trees are not permitted to be planted closer than the following distances to building foundations, fences, and roof lines:
 - > Small Tree – 0.6m away from structure
 - > Medium Tree – 1.8m away from structure
 - > Large Tree – 3m away from structure
 - > See Table 3.3b Tree Sizes in SPP 7.3 Volume 2 – Apartments for tree size definitions.
- c** For housing where the Department of Communities will be responsible for long-term maintenance (not just prior to sale), trees should be planted so their final growth size will not grow over roofs to reduce future maintenance
- d** Any paving required within a DSA area should be permeable to allow water infiltration into the soil for healthy root growth. Permeable paving should not cover more than 20% of the DSA for each tree, wherever possible.
- e** The use of permeable paving must not interfere with the provision of safe pedestrian paths throughout the site, such as those required by the *Livable Housing Design Guidelines* or other requirement as nominated by the Project Manager.

3. Maintenance and Watering

Objectives

0.5

To ensure landscaping in common property is suitable for intended type of strata management.

0.6

To ensure that planting choices are low maintenance and waterwise.

DG.3 Design Guidelines

- a** For all housing types, consider landscaping verges with lawn alternatives such as low growing, waterwise plants that do not require ongoing irrigation.³

- b** Ensure selected tree species are planted at an appropriate distance from sewer lines located in or adjacent to the development site to reduce likelihood of infrastructure damage.

Please refer to “**Select the Right Tree**” - Water Corporation website in the Useful Resources section for more information.

- c** For Grouped dwelling sites where a Strata company **will not** be established (typically sites with five (5) units or less):

1. Locate new and retained trees only on private property wherever possible;
2. Consider selecting evergreen species for trees that will overhang the Common Property area to reduce leaf litter volume;
3. Consider providing evergreen, low-maintenance shrubs that require no watering by a reticulation system once established in Common property and verge landscapes wherever possible.³

³ Note: Always consult relevant LGA policies for specific verge landscaping requirements.

4. Landscaping Strategies

LS.1 Common Driveway and Parking Bays

Location	Landscaping Strategy	Plant Categories*
1.1 Landscaping strip between driveway and fence	a A landscaping strip of minimum 500mm width should be provided as a buffer between the driveway, walls of dwellings, and fencing, with an exception made for areas where driveway must be re-routed closer to structure to create larger Deep Soil Areas.	Shade Trees Small ornamental trees
	b Where appropriate to the size of the development, consider increasing the depth of the landscaping strip between driveway and fence to accommodate large trees and shrubs to shade the driveway. This may be achieved by: <ul style="list-style-type: none"> > Removing hardscaping that is outside of vehicle turning areas wherever possible. > Moving crossovers away from corner of lot to create space for mature tree and dense low landscaping in lot corner. 	Bird-attracting plants Vertical screening plants Climbing plants
	c Wherever possible, locate services such as water meters and power domes in the common landscaping strip beside the driveway. Integrate them into garden beds with landscaping at an appropriate height to screen them from view.	
1.2 Landscaping areas between driveway and dwellings visible from Common Property	a Consider landscaping these areas with low-maintenance plants that do not obstruct views for vehicles manoeuvring on site, such as: <ul style="list-style-type: none"> > Ground cover that does not require mowing. > Low-growing plants in mulched garden beds. > Trees that only have foliage above the required sight lines. 	Shade Trees Productive plants Bird-attracting plants
	a Consider providing attractive feature landscaping such as a tree and low shrubs at the end of a common driveway to improve appearance of the development from the street and as people enter the site.	Shade Trees Small ornamental trees Bird-attracting plants
1.3 End of driveway	a Consider using tall-growing plants to create a visual screen between open car bays and adjacent rooms or outdoor spaces, especially outdoor living areas.	Shade Trees Bird-attracting plants
1.4 Open Car Bays and Visitor Car Bays	b Consider including a landscaping strip at the end of an open car bay to make the area more attractive and to function as buffer between car bays and dwellings.	Shade Trees Bird-attracting plants Shrubs
	c Hardscaping can be replaced with low-growing landscaping in the last 600mm of a car bay where the body will overhang a wheel stop or is otherwise prevented from travelling further.**	
	**Refer to AS 2800 for relevant dimensions.	

* Refer to **Section 5. Species Selection Guide** for more details

Diagram 1

Common Driveway and Parking Bays

LS.1.3 Trees and other landscaping feature should be provided at end of driveway to improve appearance.

LS.1.1a There should always be a minimum 500mm landscaping strip buffer between driveways and dwelling walls.

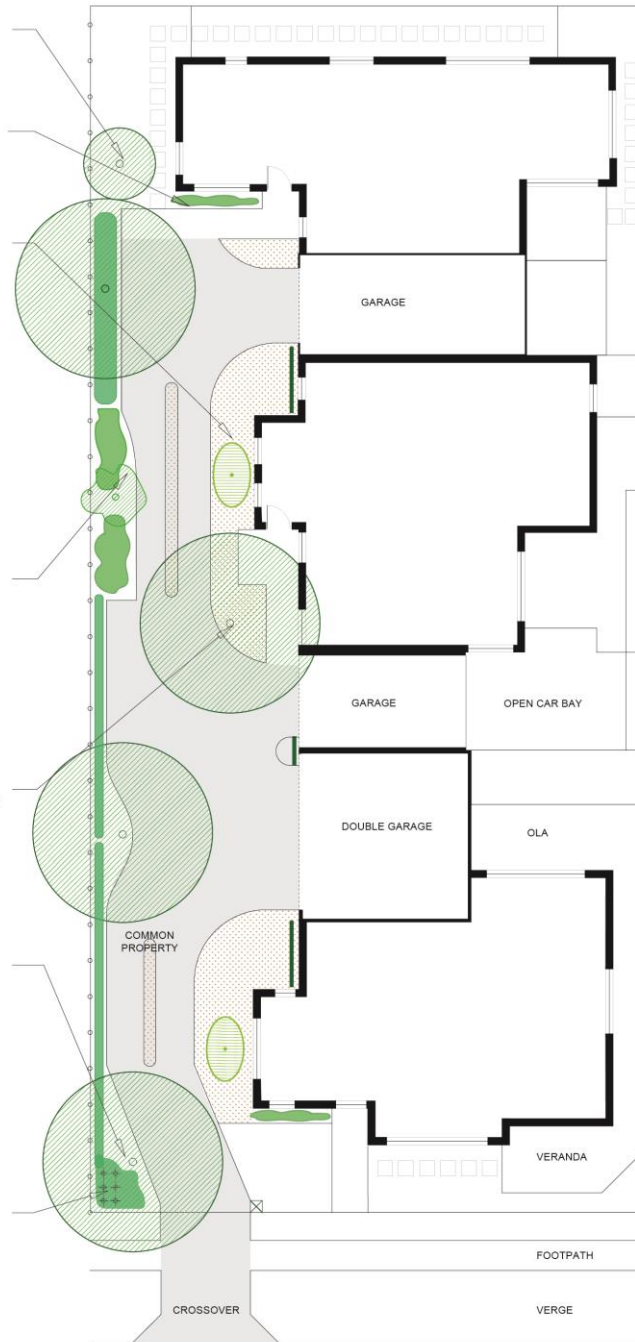
Provide mulched garden beds or ground cover that does not require mowing in common areas for easy maintenance and landscaping that will not obstruct view necessary for safe vehicle maneuvering (See R-Codes).

LS.1.1 Landscaping strips should be widened where possible to create larger landscaping areas to accommodate trees, such as by removing hardscape outside of vehicle turning areas where possible.

LS.1.2 Tree trunks should be located as far as possible from built form and fencing within the garden bed buffer provided along the driveway.

LS.1.1 Space for tree created by moving crossover away from corner of lot.

LS.1.1c Services such as water meters are screened by being integrated into garden beds.



Key	
	Productive Tree
	Vertical screening Tree
	Wide Shading Tree
	Broad Canopy Tree
	Bird/insect attracting Shrubs
	Productive Shrubs
	Climbing/Hanging Plants
	Ground cover Alternative to Grass

Please NOTE this diagram is intended to illustrate a variety of situations for reference only, and should not be considered a suitable landscaping plan for a development site.

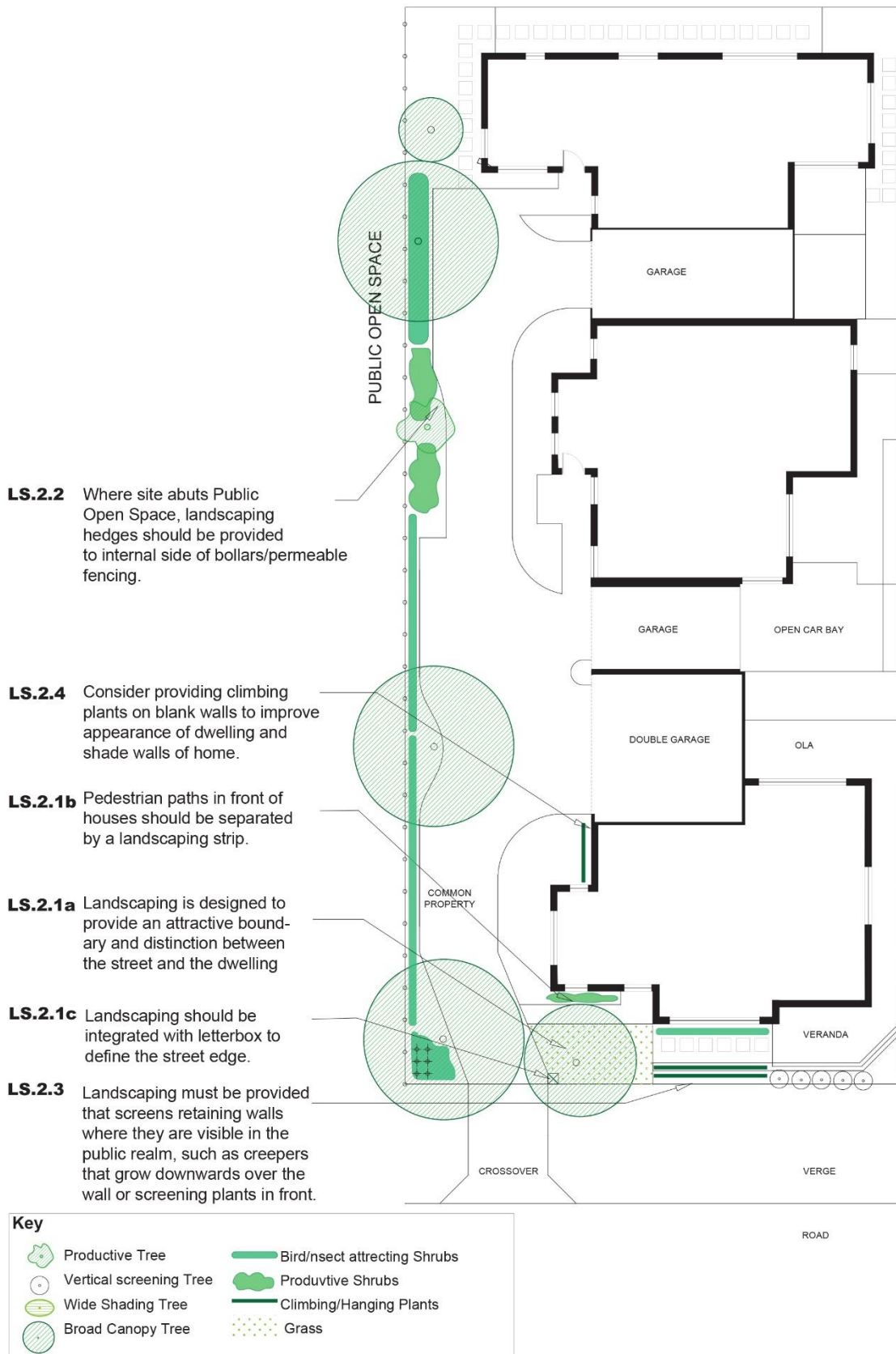
LS.2 Public Domain

Location	Landscaping Strategy	Plant Categories*
2.1 Front verge and street interface	<p>a Concentrated tree planting is encouraged at the front lot boundary in order to:</p> <ul style="list-style-type: none"> > <i>Locate trees where the risks of roots harming the built infrastructure are less than other areas of the site</i> > <i>Increase likelihood of tree retention if site is redeveloped in the future</i> > <i>Provide shade to footpaths and public domain.</i> <p>b Landscaping is designed to provide an attractive boundary and/or distinction between the public domain and the dwelling site.</p> <p>c Pedestrian paths in front of dwelling walls should be separated from walls by a landscaping strip of minimum 500mm width.</p> <p>d Landscaping should be co-located with letterboxes to define the lot boundary and provide attractive feature of the dwelling.</p>	<p>Shade Trees</p> <p>Small ornamental trees</p> <p>Bird-attracting plants</p>
2.2. Lot boundaries abutting public space	Where site abuts public domain areas such as Public Open Space (POS) or Public Access Way (PAW), provide landscaping to the internal side of bollards or other permeable fencing to create an attractive buffer between site and POS/PAW.	<p>Shade Trees</p> <p>Productive plants</p> <p>Bird-attracting plants</p> <p>Shrubs and ground cover</p>
2.3 Retaining walls	Consider providing landscaping to improve appearance of retaining walls where they are visible in the public domain, such as through use of plants that grow downwards over wall or upright screening.	<p>Cascading plants</p> <p>Vertical screening plants</p>
2.4 Blank walls	Consider providing plants that will grow to cover blank walls to provide attractive shading to dwellings.	<p>Vertical screening plants</p> <p>Climbing plants</p>

* Refer to **Section 5. Species Selection Guide** for more details

Diagram 2

Public Domain



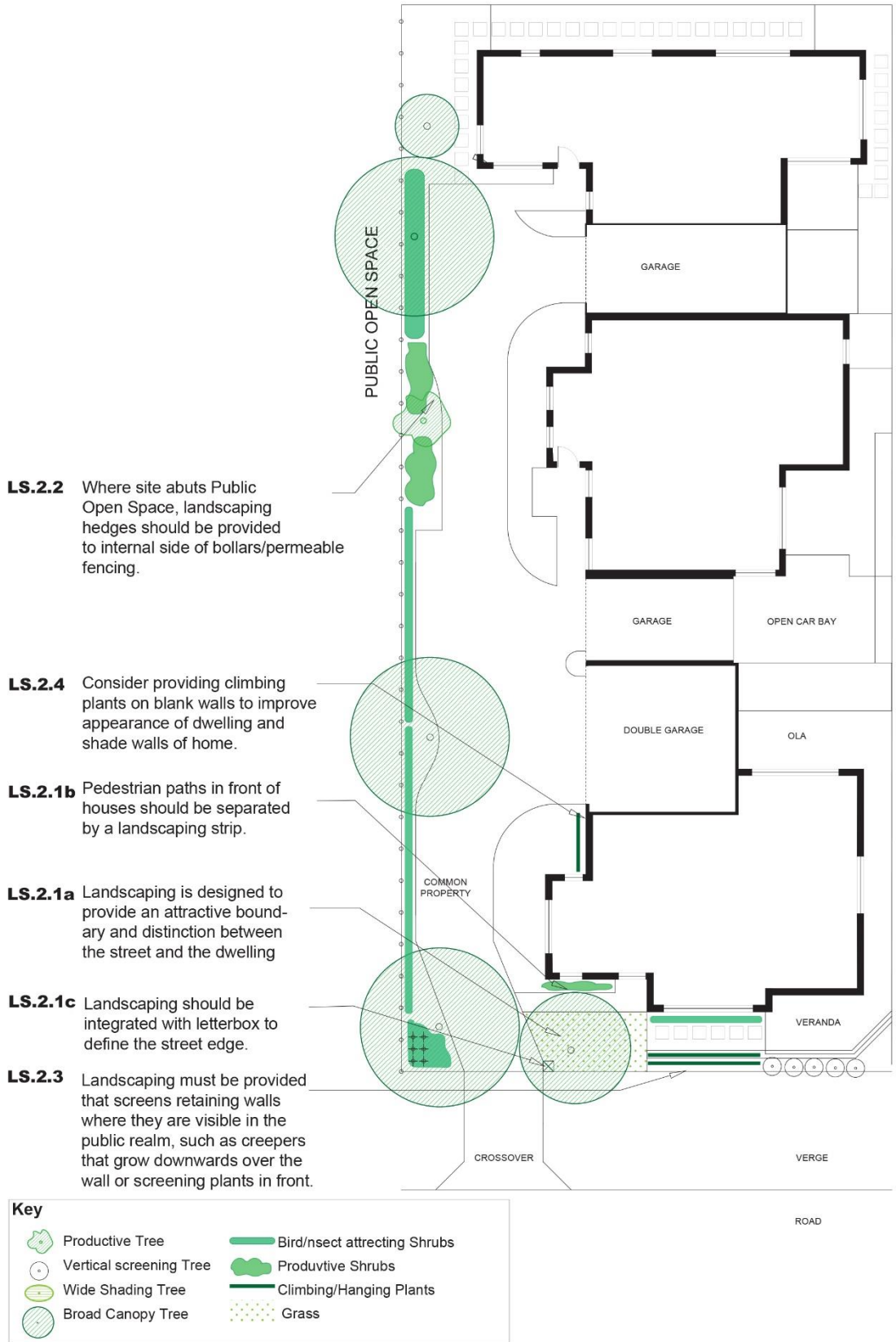
Please NOTE this diagram is for reference only and indicates possible locations and types of plants only. For calculation of DSA and TCC please refer to Appendix A.

LS3. Dwellings		
Location	Landscaping Strategy	Plant Categories*
3.1 Windows	a Consider shading east and west facing windows with shrubs, creepers, or trees to reduce heat loads on the building. Deciduous varieties will allow heat gain in winter to warm the home.	Shade Trees Small ornamental trees
	b Where windowsills are 6c above FFL, or lower, consider providing a landscaping strip in front to create an attractive outlook from the room.	Productive plants Bird-attracting plants Vertical screening plants
	c Consider providing an outlook to landscaping from all windows to habitable rooms where possible, such as: > <i>Tall-growing plants visible from highlight windows</i> > <i>Climbing vines on opposite fencing or walls</i>	Climbing plants
3.2 Outdoor Living Areas	a Grass alternatives should be considered in areas where potential space for grass is restricted and not providing it will remove the need to use a lawnmower on the dwelling property.	Ground covers Vertical screening plants
	b Outdoor living areas that are directly connected to the street boundary are preferably set behind a fence and landscaping strip of a minimum depth of 500mm with planting capable of screening the area from clear view from the street. <i>Refer to DoC Single and Grouped Housing Brief: Fencing for more details</i>	Climbing plants
3.3 Lot Boundaries	Tree planting is encouraged along lot boundaries and especially in corners to provide a larger area for canopy spread and to locate trees where they will be easy to retain if the site is redeveloped in the future.	Shade Trees Small ornamental trees

* Refer to **Section 5. Species Selection Guide** for more details

Diagram 3

Dwellings



Please NOTE this diagram is for reference only and indicates possible locations and types of plants only. For calculation of DSA and TCC please refer to Appendix A.

5. Species Selection Guide

SSG 5.1 Productive Plants

Productive plants are edible or produce parts that are useful to people in some way. Consider including them in Common Property areas of the site to create shared amenity and opportunities for neighbours to spend more time in common areas.

Please select productive plants which:

- > Produce edible/useful components
- > Are low maintenance, such as by:

Having fruit that is easy/quick to pick up off the ground
Having fruit that will not stain Hardscaping where it is closely located
Being self-fertile or have a suitable cross-pollinator provided on site
Being hardy to insects and common weather conditions

Suggested species include:

Citrus × Limon Lemon tree	Punica Granatum Pomegranate tree	Asimina Triloba Pawpaw tree
<p>Compact, strong growing with crinkled ornamental leaves and red new growth.</p> <p>Environment: Full sun Soil: Soil needs to be well watered, well drained, slightly acidic with no root competition. Height: Large shrubs or small to moderate-sized trees, reaching 5–15 m Flower: Small white flowers. Flower buds start appearing early in the winter season and bloom fully by late winter to early spring</p>	<p>Compact, strong growing with crinkled ornamental leaves and red new growth.</p> <p>Environment: Full sun Soil: Rich, friable (crumbly) soil Height: Deciduous shrub or small tree that grows between 5 and 8 m Flower: The flowers are yellow to bright red and 3 cm in diameter, with three to seven petals. Maintenance: Low</p>	<p>A small tree with a pear-shaped form and glossy, almost tropical-looking leaves.</p> <p>Environment: Susceptible to frost and cold winds. Needs protection from frost damage. Soil: Compost rich, free draining soil with regular food. Height: 5m Maintenance: Low</p>
Laurus Nobilis Bay tree	Citrus Australasica Finger Lime	Citrus Hystrix Kaffir Lime tree
<p>Large shrub or small tree with aromatic, dark green leaves.</p> <p>Environment: Full sun or part shade Soil: Moist, well-drained soil. Height: Reaching 3 to 7 m Flower: Small flowers are a pale, yellow green and borne in pairs beside a leaf. The fruit is small, black, shiny and has a 1 cm diameter. Maintenance: Low</p>	<p>Thorny understory shrub or small tree. thorns provide a perfect habitat for small birds.</p> <p>Environment: Full sun, partly shaded. Soil: Grow in a wide range of soils. Height: 6 m tall. Flower: White or pale pink and appear in late summer and autumn.</p>	<p>Thorny bush, with aromatic and distinctively shaped "double" leaves well suited to container, gardens and for large garden pots on patios, terraces.</p> <p>Environment: Full sun. Cold sensitive and need to be protected from frost. Soil: Well-drained soil Height: 2–11 m Maintenance: Low</p>

Ficus Carica <i>Fig tree</i>	Olea Europaea <i>Olive tree</i>	Citrus × Aurantiifolia <i>Lime tree</i>
<p>Large deciduous shrub to small tree with broad, rough, deciduous leaves.</p> <p>Environment: Full sun. Reasonably drought tolerant.</p> <p>Soil: All soil, free draining enriched soil</p> <p>Irrigation: Supplemental watering during hotter months.</p> <p>Height: 1- 12 metres.</p>	<p>Evergreen tree or shrub. It is short and squat trunk is typically gnarled and twisted. Perfect for small gardens or pots.</p> <p>Environment: Tolerant to drought, frost and coastal conditions. Plant in full sun.</p> <p>Soil: Favours well drained</p> <p>Flower: Small, white, feathery flowers</p> <p>Irrigation: No irrigation</p> <p>Height: 2.5 m high by 2 m wide</p>	<p>Small perennial evergreen with glossy leaves and compact size. Tree is irregularly branched and possesses sharp spines.</p> <p>Environment: Full sun.</p> <p>Soil: Sandy loam soil. Prone to rot in soil that does not drain well.</p> <p>Irrigation: Well drained.</p> <p>Height: 5m+</p> <p>Flower: Small white flowers are usually borne in clusters.</p>

Atriplex Nummularia <i>Saltbush</i>	Salvia Rosmarinus <i>Rosemary</i>	Cymbopogon Citratus <i>Lemongrass</i>
<p>A perennial species that is extremely hardy, thriving in particularly harsh environments. Grey-green irregularly shaped leaves, 2-3cm long, commonly toothed along the edges.</p> <p>Environment: Grows predominately over the warmer months. Growth slows considerably once temperatures drop below 10°C.</p> <p>Soil: Will grow on a range of soil types. It is tolerant to saline soils.</p> <p>Irrigation: Once established old man saltbush is very tolerant of dry conditions.</p> <p>Height: Grows to 3m in height and diameter.</p>	<p>Woody, perennial herb with fragrant, evergreen, needle-like leaves and white, pink, purple, or blue flowers. used as an ornamental plant in gardens and for xeriscape landscaping.</p> <p>Environment: Open, sunny position can withstand droughts, surviving a severe lack of water.</p> <p>Soil: Loam soil with good drainage.</p> <p>Height: Upright form can reach 1.5 m.</p> <p>Flower: Plant flowers in spring and summer. Flowers are white, pink, purple or deep blue.</p>	<p>Perennial fragrant herb. Good plant for growing in-ground as ornamental grass, or in containers.</p> <p>Environment: Full sun</p> <p>Soil: Rich, free draining soils.</p> <p>Irrigation: Consistent moisture and water. Keep plants well-watered throughout the summer.</p> <p>Height: Up to 2 m</p>

Lavandula. L. Augustifolia <i>Lavender</i>
<p>Silvery-green foliage, upright flower spikes and compact shrub-like form, lavender is ideal for creating informal hedges.</p> <p>Environment: Full sun.</p> <p>Soil: Well-drained soil.</p> <p>Height: 0.6-0.9 m high x: 0.6-0.9 m wide</p> <p>Flower: Lavender, deep blue-purple, light pink, white.</p> <p>Maintenance: Low.</p>

SSG 5.2 Vertical Screening Plants

These plants can be used as screens to improve privacy of fencing or appearance of blank building elements, such as large areas of featureless walls or fencing.

Please select vertical screening plants which:

- > Are evergreen
- > Have dense growth to provide visual screen
- > Grows well in narrow garden beds (500mm)
- > Can be pruned without damage
- > Have fast to moderate growth

Suggested species include:

<p>Murraya Paniculata <i>Orange Jessamine</i></p>	<p>Viburnum Suspensum <i>Sandankwa Viburnum</i></p>	<p>Viburnum Odoratissimum <i>Sweet Viburnum</i></p>
<p>Dense habit with glossy green foliage.</p> <p>Environment: Full-sun position to moderately shaded position. Height: 50cm -1m wide x 3m high Flower: White perfumed flowers in Spring and Summer.</p>	<p>A hardy evergreen shrub with white flowers during Spring followed by orange red berries. An ornamental plant ideal for hedges, containers, borders or as a feature plant.</p> <p>Environment: Full-sun position to partly shaded position. Soil: Moist, rich well-drained. Irrigation: Keep well-watered in dryer months Height: 3.5m high x 1.5m wide Flower: White in Spring</p>	<p>Fine leaf and short inter-node leaves. Reddish accented new growth. Pruning is less than common variety.</p> <p>Environment: Full-sun position to partly shaded position. Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 3.5m high x 2m wide Flower: NA</p>
<p>Acmena Smithii 'Sublime' <i>Sublime Lilly Pilly</i></p>	<p>Photinia 'Red Fence'</p>	<p>Pittosporum 'Screenmaster'</p>
<p>It is an evergreen Australia tree. Used for screening and hedging if pruned to shape. This plant has vivid lime green new growth which slowly darkens over time.</p> <p>Environment: Full sun to part shade Soil: in well drained to heavy clay loam. Height: 2-3m high x 1m wide Flower: Small white flowers in summer Maintenance: Requires little maintenance can be pruned to maintain height and shape.</p>	<p>Compact, strong growing with crinkled ornamental leaves and red new growth.</p> <p>Environment: Full sun to part shade Soil: All soil types Irrigation: Can tolerate dryness once established Height: 2-3m high x 1m wide Flower: Small white flowers in mid to late spring Maintenance: Prune once a year or twice for a tight hedge</p>	<p>Upright growing shrub with good coverage.</p> <p>Environment: Full-sun position to part shade Soil: All soils. Irrigation: Can tolerate dryness. Height at maturity: 3-4m high x 2m wide Flowers: NA Maintenance: Medium. Trimming required to shape and keep narrow.</p>

Grevillea 'Kay Williams'	Grevillea Olivacea <i>Olive Grevillea</i>	Rhaphiolepis 'Springtime' <i>Indian Hawthorn</i>
Compact shrub or hedge screen. Bird attracting and long flowerings	WA native with upright growing habit and dense foliage. Bird attracting.	A small evergreen shrub ideal for hedging.
Environment: Full sun in well-drained soil	Environment: Full sun in well-drained soil	Environment: Full sun in well-drained soil
Soil: All soils. Irrigation: Can tolerate dryness once established	Soil: All soils. Irrigation: Can tolerate dryness once established	Soil: Well drained soil. Irrigation: Can tolerate some dryness once established
Height at maturity: 3m high x 1.5m wide	Height at maturity: 2.5-4m high x 2.5-4m wide	Height at maturity: 1.5m high x 1.5m wide
Flowers: Pink-cream in winter/spring/summer	Flowers: Pink-cream in winter/spring/summer	Flowers: Pink flowers in spring
Maintenance: Medium. Prune for compact growth and for hedging	Maintenance: Low. Prune after flowering to maintain desired shape.	Maintenance: Low

SSG 5.3 Dwelling Shade Trees

These trees are small, deciduous trees for use outside of east and west windows to reduce solar heat gain to homes in warm months but allow it in cooler months when the tree will drop its leaves.

Please select dwelling shade trees which:

- > Have dense and low-growing canopy
- > Have attractive growth, such as flowers
- > Grow well when planted close to buildings or fences
- > Present low risk of harm to nearby structures

Some suggested species include:

Lagerstroemia Indica x L. fauriei 'Natchez <i>Crepe Myrtle</i>	Bauhinia Purpurea <i>Purple Butterfly Tree / Orchid tree</i>	Pyrus Nivalis <i>Snow Pear</i>
<p>Upright multi-stemmed specimen tree with a broad spreading crown and masses of flowers. It has red-bronze autumn foliage colour and exfoliating bark which reveals a pinkish-brown underbark.</p> <p>Environment: Full-sun to partly shaded position. Soil: Well-drained. Irrigation: Can tolerate dryness. Height at maturity: 5-6m x 5m wide. Flower: White crepe flowers in summer. Maintenance: Medium growth Lifespan: 50 - 100 years</p>	<p>Medium sized orchid tree. Butterfly shaped leaf with only 2 broad leaflets.</p> <p>Environment: Full-sun to partly shaded position. Soil: Best in moist well-drained soil, Height at maturity: 6-10m x 6m wide. Flower: Large purple/pink flowers in Autumn Lifespan: 25 -50 years</p>	<p>Oval shaped, grey foliage with yellow autumn colours.</p> <p>Environment: Full-sun position. Soil: moist & rich. Height at maturity: 10m high x 8m wide. Flower: Abundant white flowers om racemes Root system: Non-invasive. Maintenance: Low Lifespan: 15 - 25years</p>

SSG5.4 Broad Shade Tree

These trees provide shade to on-site hardscaping and the public domain to reduce temperatures around the home and urban heat island effect in the suburb.

Please select broad shade trees which:

- > Have good growth when planted close to buildings or fences
- > Present low risk of harm to nearby structures
- > Have a high branching point to accommodate cars and pedestrians beneath

Suggested species include:

<p>Sapium Sebiferum <i>Chinese Tallow</i></p>	<p>'Royal Poinciana' Delonix Regia <i>Flame tree</i></p>	<p>Gleditsia Triacanthos Inermis 'Shademaster' <i>Shademaster</i></p>
<p>Common deciduous colourful tree. This is an attractive small tree with round or oval sharply pointed leaves; they turn red in autumn.</p> <p>Environment: Full-sun to relatively shady Soil: Well-drained Irrigation: Prefer wet environments and susceptible drought water required. Height: 7m high x 5m wide Habit: Oval Flower: N/A Lifespan: 100+ years</p>	<p>Broad spreading, deciduous dark green fern-like leaves.</p> <p>Environment: Tolerate Full-sun position to light shade. Not frost tolerant Soil: Rich, well drained soils (pH 6.5-7). Irrigation: Additional water required in dry periods Height: 8m high x 7m wide. Flower: Red/orange colour with 5 petals Maintenance: Pruning required in early years Lifespan: 50 years</p>	<p>Graceful and pendulous style tree forming into an open rounded tree. The golden tips create a lovely contrast against a green background.</p> <p>Environment: Full-sun to partly shaded position. Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 8-10m x 6-8m wide. Flower: NA Maintenance: Low Lifespan: 100 - 120 years</p>
<p>Gleditsia triacanthos var. Inermis 'Sunburst'</p>	<p>Tristaniopsis Laurina Luscious <i>Water Gum</i></p>	<p>Pyrus Calleryana Bradford' <i>Callery Pear</i></p>
<p>Graceful and pendulous style tree forming into an open rounded tree. New growth is a bright yellow, maturing to yellow green. Golden yellow in Autumn</p> <p>Environment: Full-sun to partly shaded position. Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 8-10m x 6-8m wide. Flower: NA Maintenance: Deciduous tree. Lifespan: 100 - 120years</p>	<p>Shiny foliage with red coloured tipped new growth and yellow flowers with a sweet perfume.</p> <p>Environment: Tolerates a wide range of soil and climate Soil: Light to heavy soils Irrigation: Not suited to very dry climates or exposure to hot winds Height: 7-12m high x 5m wide Habit: Oval Flower: yellow flowers late winter and spring. Root system: Non-invasive. Maintenance: Minimal. Pruning to shape Lifespan: 50 - 60 years</p>	<p>A vigorous, down-headed medium sized tree.</p> <p>Environment: Full-sun position. Soil: Moist conditions preferred Irrigation: Adequate water required. Height: 10m high x 6 wide. Flower: White flowers in early spring Rate of growth: Moderate Lifespan: 20 - 25 years</p>

SSG5.5 Small Ornamental Trees

These are small-growing trees that provide shade and interest in outdoor living areas with restricted space.

Please select small ornamental trees which:

- > Have a small growth habit
- > Have good growth when planted close to buildings or fences
- > Are attractive throughout the year
- > Present low risk of harm to nearby structures

Suggested species include:

<p>Cercis Canadensis <i>Forest Pansey</i></p> <p>Purple elegant foliage. Open and low branching, forming a flat-topped canopy. The young branches have a distinct 'zig-zag' habit.</p> <p>Environment: Soil: Well-drained. Irrigation: Water at install. Height at maturity: 3-5m high x 3-5m wide Habit: Oval Flower: Masses of small, pink, 'pea'-like flowers borne in groups along the branches before the leaves appear in spring. Lifespan: 20 - 50 years.</p>	<p>Pyrus Fauriei <i>Korean Sun</i></p> <p>A deciduous compact glossy leaved tree turning reddish orange + purple in autumn.</p> <p>Environment: Full-sun position. Soil: Well-drained. Irrigation: Adequate water required. Height at maturity: 5m high x 4m wide. Habit: Upright Flower: White flowers in early spring Root system: Non-invasive. Maintenance: Leaf fall Lifespan: 50 years.</p>	<p>Cercis Canadensis <i>Roethgold Chain of Hearts</i></p> <p>Golden-yellow to light green foliage with the most distinctive large, heart-shaped leaf. Tight habit which makes this a perfect tree for smaller sized gardens.</p> <p>Environment: Full-sun to part-shade. Soil: Well-drained. Irrigation: Water at install. Height: 3.5m high x 3.5m wide Habit: Oval Flower: Clusters of mauve flowers on bare branches in spring. Lifespan: 20- 50 years</p>
<p>Lagerstroemia Indica x L. Fauriei 'Acoma' <i>Indian Summer Crepe Myrtle</i></p> <p>A tough, small tree for small gardens. Multi branching, low spreading, semi-pendulous branches.</p> <p>Environment: Full-sun. Soil: Well-drained, slightly acidic soils. Irrigation: Moderate drought and heat tolerant. Height: 4m x 3m wide. Flower: White in summer to early autumn. Maintenance: Slow growth Lifespan: 50 years.</p>	<p>Lagerstroemia Indica x Fauriei 'Tonto' <i>Crepe Myrtle</i></p> <p>Tolerant of a wide range of site conditions, a large deciduous shrub to small tree, good for small spaces or containers.</p> <p>Environment: Full sun position. Soil: Well-drained humus rich soil. Irrigation: Prefers moisture in dry periods when young. Height at maturity: 3m x 3m wide. Flower: Fuchsia red flowers in late summer to mid-autumn. Maintenance: Slow growth Lifespan: 50 years.</p>	

SSG5.6 Bird and Insect Attracting Plants

These plants provide food and habitats to wildlife to support local biodiversity.

Please select Bird and insect attracting plants which:

- > Provide foraging for a diversity of pollinator groups over the seasons

Note: To be effective, the same species of insect attracting plants should be planted in multiple areas throughout the site so different insect groups can collect from the plant at the same time.

Suggested species include:

<p>Acacia Saligna <i>Golden Wreath Wattle</i></p>	<p>Adenanthos Cuneatus Coral Carpet <i>Jug Flower</i></p>	<p>Banksia Blechnifolia <i>Prostrate Banksia</i></p>
<p>Prostrate fast-growing ground cover.</p> <p>Environment: Full-sun to part-shade with free-draining soil Height: 30-40cm high x 3m wide. Maintenance: Low. Trim to contain</p>	<p>Ground cover features textured colourful foliage.</p> <p>Environment: Full-sun to part-shade. Drought resistant. Soil: Sandy, Loamy, Sandy loam. Well drained. Height: 30-40cm high x 1.5-2m wide. Maintenance: Low.</p>	<p>Dwarf spreading shrub with large pink-red flowers in spring to summer.</p> <p>Environment: Full sun or part-sun in well-drained, moist soil Height: 30cm high x 2m wide. Maintenance: Low</p>
<p>Banksia Nivea <i>Honeypot</i></p>	<p>Calothamnus Quadrifidus 'Prostrate' <i>One-sided Bottlebrush</i></p>	<p>Grevillea 'Red Coral' <i>Grevillea</i></p>
<p>Small shrub with long foliage and orange flowers in winter and spring.</p> <p>Environment: Sunny position in well-drained sand soil Height: 0.8m high x 0.8m wide. Maintenance: Low</p>	<p>Suits coastal and windy positions. Red flowers in spring and summer.</p> <p>Environment: Full-sun to part-sun with free-draining soil Height: 0.8m high x 2m wide. Maintenance: Low. Regular compost and fertiliser.</p>	<p>Silver foliage on low growing, spreading plant. Red flowers in spring.</p> <p>Environment: Full-sun with well-draining soil Height: 30cm high x 2m wide. Maintenance: Low. Fertilise every 6 months</p>
<p>Grevillea Crithmifolia (Prostrate) <i>Green Carpet</i></p>	<p>Grevillea Obtusifolia <i>Gingin Gem</i></p>	<p>Kennedia Prostrata <i>Running Postman/ Scarlet Runner</i></p>
<p>Evergreen shrub with soft, silver-green foliage with white flowers in spring.</p> <p>Environment: Full-sun with well-draining Soil: Tolerates salty conditions Height: 30cm high x 2m wide. Maintenance: Low.</p>	<p>Spreading groundcover with red flowers year round.</p> <p>Environment: Full-sun with well-draining soil. Tolerates light shade and coastal conditions. Height: 30cm high x 2m wide. Maintenance: Low.</p>	<p>Spreading groundcover with grey-green foliage and red flowers in spring.</p> <p>Environment: Full-sun to part-shade Soil: with well-draining soil. Loamy, Sandy loam, Clay loam. Height: 10cm high x 3m wide. Maintenance: Low. Prune to desired size.</p>

Adenanthos Sericea
Compact
Dwarf Woolly Bush

Dwarf woolly bush with silver/green woolly soft foliage. Red flowers in spring.

Environment: Full-sun to part-shade
Soil: free-draining sandy poor soil.
Well drained soil
Height: 1m high x 1m wide.
Maintenance: Low

Melaleuca Huegelii
Chenille Honey Myrtle

Upright shrub with fine foliage and white flowers in spring and summer. Medium to tall shrub. Planting in a group as a windbreak, shelter or barrier in wider verges, median strips.

Environment: part shade
Soil: Clay, Loam, Sand
Height: 1.5m high x 2-4m wide.
Maintenance: Low

Scaevola Purple Fanfare
Fan Flower

Flat growing groundcover with purple flowers all year. Low and spreading, ideal for mass planting and underplanting around shrubs.

Environment: Sun to light shade
Soil: most soil types. Well drained soil.
Height: 0.2m high x 1.5m wide.
Maintenance: Low

Scaevola Crassifolia
Prostrate
Cushion Fan Flower

A fast spreading ground cover with bright green foliage and masses of blue fan shaped flowers in autumn, spring and summer.

Environment: Sun to light shade
Soil: Most soil types. Well drained soil.
Height: 0.5m high x 2m wide.
Maintenance: Low

SSG5.7 Additional Shrubs and Ground Covers

These plants should be used to provide landscaping that is attractive and diverse across different housing sites developed by Communities.

Please choose additional shrubs and ground covers which:

- > Are robust and long-living
- > Have a low waterwise rating

Suggested species include:

<p>Anigozanthos Flavidus <i>Evergreen Kangaroo Paws</i></p>	<p>Anigozanthos 'Dwarf Delight' <i>Kangaroo Paws</i></p>	<p>Callisetmon <i>Bottlebrush</i></p>
<p>It is a perennial herb, with evergreen leaves growing up to one metre long and two centimetres wide, forming clumps up to two metres across.</p> <p>Environment: Full sun Soil: Adaptable to most soil types, from sandy to clay, and will even grow partly immersed, tolerating wet feet. Height: 2m high x 1m wide. Flower: Flowering occurs from November to February. The flowers are commonly green and yellow, but also occur in red, pink and orange Maintenance: Low</p>	<p>It is a perennial herb, with evergreen leaves growing up to one metre long and two centimetres wide, forming clumps up to two metres across.</p> <p>Environment: Full sun Soil: Adaptable to most soil types, from sandy to clay, and will even grow partly immersed, tolerating wet feet. Height: .8m high x 1m wide. Flower: Flowering occurs from November to February. The flowers are commonly green and yellow, but also occur in red, pink and orange Maintenance: Low. Fertilise in autumn and spring.</p>	<p>Blue-green foliage with masses of red flowers in spring and autumn.</p> <p>Environment: Full sun in all soils. Will tolerate dry periods and coastal location Height: 1m high x 1m wide. Maintenance: Low</p>
<p>Convolvulus Cneorum <i>Silverbush or Shrubby Bindweed</i></p>	<p>Conostylis Candicans <i>Cottonheads</i></p>	<p>Correa Backhouseana var. Coriacea <i>West Australian Correa</i></p>
<p>Trailing Mediterranean ground cover, perennial with soft velvety silver leaves and pure white morning glory flowers. rockeries and hanging baskets, mass planting for groundcover, accent colour.</p> <p>Environment: Full sun Soil: Free-draining soil, even poor and dry spots Height: 0.5m high x 0.6-1m wide. Maintenance: Low</p>	<p>Perennial plant. Grey-green foliage with small clusters of yellow flowers.</p> <p>Environment: Full sun to part-shade Soil: Sandy, Loamy, Sandy loam, Potting mix, Poor soil Height: 0.3-0.8m high x 0.3-0.8m wide. Maintenance: Low</p>	<p>Grey foliage with yellow flowers in winter and spring. hardy plant that is useful as a screening plant or along fence lines</p> <p>Environment: Full sun to part-shade Soil: All soils Height: 1m high x 1m wide. Maintenance: Low</p>

Dianella 'Breeze' <i>Blue Flax Lily</i>	Dianella Tasmanica 'Tasred' <i>Tasman Flax-lily</i>	Eremophila Glabra 'Kalbarri Carpet' <i>Tar Bush</i>
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Cascading dark green foliage and blue flowers in spring followed by rich purple berries. Suited for erosion control, mass plantings and under storey plant for both dense and light tree plantings.

Environment: Full Sun, Part Sun, Shad can tolerate excessive dry and wet conditions.
Soil: Well drained soils.
Height: 0.6m high x 0.6m wide.
Maintenance: Low

Green and red wide strappy leaves with blue flowers in spring and large purple berries in spring and summer. Suitable for mass plantings, low water gardens, and accent planting

Environment: Full Sun, Part Sun, Shad can tolerate excessive dry and wet conditions.
Soil: Well drained soils.
Height: 0.45m high x 0.5m wide.
Maintenance: Low

Ground cover shrub, with dense soft grey foliage and beautifully contrasting yellow-gold flowers. Main flowering is in spring and summer, with spot flowers in winter and autumn.

Environment: Full Sun, Part Sun.
Soil: Sandy, Sandy loam, Clay loam, Poor soil. Dry, Well-drained
Height: 0.1-0.2m high x 1-2m wide.
Maintenance: Low

Eremophila Glabra 'Blue Horizon'	Grevillea Olivacea 'Apricot Glow' <i>Olive Leaf Grevillea</i>	Grevillea Olivacea 'Red' <i>Olive Leaf Grevillea</i>
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Low growing groundcover with blue-grey foliage with yellow flowers in winter.

Environment: Full sun to part shade
Soil: Well-drained soils
Height: 0.25m high x 1m wide.
Maintenance: Low

Dense, deep-green foliage with spider-like glowing apricot flowers from spring through to late winter.

Environment: Full sun
Soil: All soils
Height: 2.5-4m high x 2.5-4m wide.
Maintenance: Low

Dense, deep-green foliage and displays a profusion of spider-like red flowers produced for an extended period from winter through to late spring. Suitable for mass plantings and a screening

Environment: Full Sun, Part Sun
Soil: All soils
Height: 2.5-4m high x 2.5-4m wide.
Maintenance: Low

Hibbertia Scandens <i>Guinea flower</i>	Liriope Muscari 'Lirj' Just right <i>Lily turf flower</i>	Leucophyta Brownii 'Silver Nugget' <i>Dwarf Cushion Bush</i>
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Vigorous climber or scrambler with flowers. Will climb trees and fence if planted next to them.

Environment: Full-sun to partly shaded position.
Soil: Sandy, Clay, Loamy, Sandy loam, Poor soil.
Irrigation: Frost & Drought tolerant
Height: .5-3mm high, 1-5m wide
Flower: Yellow flowers in winter and spring
Maintenance: Low. Hardy & require annual pruning

Dark green strappy foliage with white to lilac flowers in spring. Roadsides, mass plantings, feature plantings and gardens.

Environment: Full sun, light to heavy shade. Tolerates heat and frost.
Soil: sandy to clay soils.
Height: 0.5m high x 0.5m wide.
Maintenance: Very low

Tight compact mound of silver-grey foliage. is a hardy and adaptable plant which is well suited to rockeries, borders and ideal for coastal landscape

Environment: Full Sun, Part Sun.it is both drought and frost tolerant
Soil: well drained soils
Height: 0.5m high x 0.5m wide.
Maintenance: Low

<p>Lomandra Fluviatilis Shara</p> <p>Tidy, compact form of Lomandra, which is very hardy and drought tolerant. Ideal for erosion protection on banks. Perfect used as a border plant and around rockeries.</p> <p>Environment: Full sun Soil: Tolerates most soil types. Height: 0.m high x 0.5m wide. Maintenance: Low</p>	<p>Lomandra ‘Tanika’</p> <p>Evergreen native grass. Compact leaf form with soft fine leaves and small yellow flowers that blossom in spring. Ideal for borders, specimen or mass planting.</p> <p>Environment: Full sun and low sun. Soil: Tolerates most soil types Height: 0.6m high x 0.6m wide. Maintenance: Low</p>	<p>Lomandra Longfolia ‘Nyalla’</p> <p>Narrow, strappy blue toned leaves with striking yellow flowers in spring. Great for rockeries, embankments, borders and specimen planting.</p> <p>Environment: Full sun to partly shaded. Tolerates coastal conditions. Soil: sandy, loam and free-draining clay loam soils. Height: 0.8m high x 0.8m wide. Maintenance: Low</p>
<p>Myoporum Insulare <i>Coastal Carpet</i></p> <p>Low spreading ground planting with clean foliage.</p> <p>Environment: Full-sun to light shaded position. Coastal Soil: All soils. Irrigation: Can tolerate dryness. Height: 20cm high x 1m wide Flower: Small white flower from winter to summer. Maintenance: Low</p>	<p>Myoporum Parvifolium <i>Dwarf Native Myrtle</i></p> <p>A prostrate cascade planting with clean foliage.</p> <p>Environment: Full-sun to light shaded position. Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 10cm high x 1m wide Flower: White flower in Spring/Early summer. Maintenance: Low</p>	<p>Olearia Axillaris <i>Coastal daisy bush</i></p> <p>A tough evergreen shrub with dense, small, grey white foliage which is highly ornamental This plant is superb for hedging and foliage contrast, especially in coastal and exposed gardens.</p> <p>Environment: Full-sun. Tolerates coastal exposure, strong winds, Soil: Well-drained soil. Tolerates salty or poor soils and extended dry periods. Height: 1-2m high x 1-2m wide Maintenance: Low. Trim if needed</p>
<p>Westringia Fruticosa <i>‘Mundi’</i></p> <p>Hardy groundcover with white flowers on grey-green foliage. Can be left unpruned whilst still maintaining a tidy form or can be pruned into any low growing architectural shape. Ideal for tough roadsides or where you need a low growing plant that requires minimal care. Tough enough to live on natural rainfall.</p> <p>Environment: Full-sun to semi-shade Soil: Well-drained soils Height: 0.4m high x 1.5m wide. Maintenance: Low</p>	<p>Westringia Fruticosa <i>‘Low Horizon’</i></p> <p>Dense and compact plant with grey green foliage and white flowers. Ideal low hedging choice for dry areas.</p> <p>Environment: Full sun to part shade Soil: Well-drained soils Height: 0.3m high x 0.7m wide. Maintenance: Low</p>	<p>Rhaphiolepis Sp. <i>Indian Hawthorn</i></p> <p>Small, low-maintenance shrub or ground cover. This shrub is an evergreen with a dense mounded or round shape. The foliage is clustered at the ends of numerous branching stems, helping this plant to achieve its dense appearance.</p> <p>Environment: Full sun to part shade Soil: Can tolerate sandy soil and salt spray, making it appropriate for coastal plantings. Height: 1–1.5 m high Flower: White or pink, 1–2 cm diameter, The fruit is a small pome 1–2 cm diameter, ripening dark purple to black. Maintenance: Low</p>

Pimelea Ferrugina
Rice Flower

Compact perennial shrub with glossy foliage with pink flowers in spring and summer. A great feature plant for rockeries, borders or pots.

Environment: In full sun or part shade
Soil: Loamy, Sandy loam, Potting mix
Height: 1/1.2m high x 0.7/1m wide.
Maintenance: Low

Philodendron Xanadu
Xanadu

Lush, compact, tidy growth with glossy lobed leaves. Great as an understory filler or mass planted in feature gardens or borders.

Environment: Full sun to part shade
Soil: Well drained soils
Height: 0.5-0.9m high x 0.5-0.7m wide.
Maintenance: Low

SSG5.8 Climbing plants

These plants are grown on trellises or pergola structures to create attractive cover for fencing, blank walls, or overhead structures such as the edge of alfresco covers.

Please choose climbing plants which:

- > Are evergreen
- > Grow on supports such as trellises, wires and similar
- > Do not mark or damage in any way surfaces and structures they come into contact with

Suggested species include:

<p>Hardenbergia Comptoniana <i>Native Wisteria</i></p>	<p>Hibbertia Scandens <i>Guinea Flower</i></p>	<p>Pandorea Pandorana <i>Wonga Wonga Vine</i></p>
<p>Vigorous climber with green divided leaves. Will climb trees and fence if planted next to them.</p> <p>Environment: Full-sun to partly shaded position. Soil: Well-drained. Irrigation: Frost & Drought tolerant Height: 2-3m high, 2m wide Flower: White flowers in winter and spring Maintenance: Low. Hardy & require annual pruning</p>	<p>Vigorous climber with flowers. Will climb trees and fence if planted next to them.</p> <p>Environment: Full-sun to partly shaded position. Soil: Sandy, Clay, Loamy, Sandy loam, Poor soil. Irrigation: Frost & Drought tolerant Height: .5-3mm high, 1-5m wide Flower: Yellow flowers in winter and spring Maintenance: Low. Hardy & require annual pruning</p>	<p>Fast growing native climbing plant.</p> <p>Environment: Full-sun to part shade Soil: Well-drained. Irrigation: Can tolerate dryness Height: 3m wide Flower: Profusion of flowers in early spring Maintenance: - Low. Trimming required.</p>
<p>Pandorea Jasminoides 'Lady Di' <i>Bower Vine</i></p>	<p>Trachelospermum Jasminoides <i>Star Jasmine</i></p>	<p>Mandevilla 'Opale Citrine' & 'Giant White' <i>Rocktrumpet</i></p>
<p>Medium sized vigorous, hardy climber with bright green foliage.</p> <p>Environment: Part sun Soil: Well-drained neutral to acidic soils. Height: 3m high, 5m wide Flower: White flowers in summer Maintenance: Low. Hardy & require annual pruning</p>	<p>An evergreen vine with thick glossy leaves, with excellent coverage.</p> <p>Environment: Full-sun to partly shaded position. Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 20cm high x 3m wide Flower: Small perfumes white flowers in Spring/Early summer.</p>	<p>Fast growing evergreen that will remain as a shrub in full sun, in shade with produce tendrils and climb. Ideal for trellis or fences.</p> <p>Environment: Full-sun to partly shaded position. Soil: Well-drained. Height: 5m high Flower: White/yellow flowers in summer, autumn and late spring Maintenance: Low.</p>

SSG5.9 Cascading Plants

These plants can be used to soften to appearance of retaining walls or embankments with plants grown downwards from elevated garden beds.

Please choose cascading plants which:

- > Have a low waterwise rating
- > Present low risk of harm to nearby structures

Suggested species include:

<p>Acacia Cognata <i>Bower Wattle</i></p> <p>Lush foliage and compact weeping habit.</p> <p>Environment: Full-sun to part shaded position. Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 50cm high x 1m wide Flower: White flower in Spring/Early summer. Maintenance: Low</p>	<p>Acacia Saligna <i>Golden Wreath Wattle</i></p> <p>Prostrate fast-growing ground cover.</p> <p>Environment: Full-sun to part-shade with free-draining soil Height: 30-40cm high x 3m wide. Maintenance: Low. Trim to contain</p>	<p>Lomandra Hystrix <i>Tropic Cascade</i></p> <p>Weeping foliage compact form. Can handle periods of wet feet. It is a good erosion control option as it strengthens the soil 159%.</p> <p>Environment: Full-sun to part shade. Soil: Most soil types, prefer moist soil. Tolerates periodic inundation, not 5cm or more permanently Height: 60-80cm tall x 60-80cm wide Flower: Large fragrant yellow. Maintenance: Trim the foliage by 1/3 to reduce the overall height. This can be done in spring every 2/ 3 years. Fertilize after trimming.</p>
<p>Myoporum Parvifolium <i>Dwarf Native Myrtle</i></p> <p>A prostrate cascade planting with clean foliage. Can tolerate dryness.</p> <p>Environment: Full-sun to light shaded position. Soil: Well-drained. Height: 10cm high x 1m wide Flower: White flower in Spring/Early summer. Maintenance: Low</p>	<p>Myoporum Insulare <i>Coastal Carpet</i></p> <p>Low spreading ground planting with clean foliage.</p> <p>Environment: Full-sun to light shaded position. Coastal Soil: All soils. Can tolerate dryness. Height: 20cm high x 1m wide Flower: Small white flower from winter to summer. Maintenance: Low</p>	<p>Trachelospermum Jasminoides <i>Star Jasmine</i></p> <p>An evergreen vine with thick glossy leaves, with excellent coverage.</p> <p>Environment: Full-sun to partly shaded position. Soil: Well-drained. Height: 20cm high x 3m wide Flower: Small perfumes white flowers in Spring/Early summer. Maintenance: Medium</p>
<p>Casuarina Glauca var. <i>Cousin It</i></p> <p>Fine and cascade foliage.</p> <p>Environment: Full sun to part shade positions. Soil: Well drained soils. Irrigation: Tolerates dryness. Height: 1m wide x 0.15m high Flower: Reddish brown terminal flower spikes</p>	<p>Grevillea Crithmifolia (Prostrate) <i>Green Carpet</i></p> <p>Evergreen shrub with soft, silver-green foliage with white flowers in spring.</p> <p>Environment: Full-sun with well-draining Soil: Tolerates salty conditions Height: 30cm high x 2m wide. Maintenance: Low</p>	<p>Hemiandra Pungens Alba <i>Snakebush</i></p> <p>Evergreen. A prostrate cascade planting with green foliage and full cover.</p> <p>Environment: Full-sun to full shaded position. Coastal Environment Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 20cm high x 2-3m wide Flower: White flowers Maintenance: Low</p>

Russelia Equisetiformis***Firecracker***

Multi-branching planting with arching stems.

Environment: Full-sun

Soil: Moist to well drained.

Height: 1.5m high x 4m wide

Flower: Red tubular flowers

Maintenance: Low

SSG5.10 Ground Covers

These plants should be used to provide low maintenance alternatives to grass for use in low-traffic areas such as common property.

Please choose ground covers which:

- > Are Low-growing (<40cm) to maintain vehicle sight lines
- > Do not require mowing
- > Are suitable at least for very light traffic

Suggested species include:

<p>Dichondra Repens <i>Kidney Weed</i></p> <p>A groundcover that will spread and create a lawn in cooler areas or in partly shaded gardens. Works well to fill gaps.</p> <p>Environment: Part sun to shade Soil: Well-drained. Irrigation: Water wise once established Height: 10cm high x 30cm wide Flower: None</p>	<p>Pratia Pendunculata <i>Blue Star Creeper</i></p> <p>A mat forming perennial with small green leaves. Ideal between stepping stones.</p> <p>Environment: Full sun to part shade positions. Soil: Well drained solid Irrigation: Moist to wet soils Height: 5cm high x 50cm wide Flower: White flowers in spring to autumn</p>	<p>Dianthus Sp. <i>Karanfil</i></p> <p>Dianthus is suitable for borders, rock gardens, container baskets, potted displays, and ground covers. Versatility and attractiveness to pollinators.</p> <p>Environment: Full sun. Frost tolerant Soil: Tolerate droughty soil, requires well drained soil. Prefers Slightly Alkaline soil. Flower: Spice-scented blooms with ruffled and toothed/fringed petals in shades and combinations of pink, red and white Maintenance Cut plants back by half after flowering. Allow seeds to develop and set before cutting if self-seeding is desired</p>
<p>Thymus Serpyllum <i>Creeping Thyme</i></p> <p>Mini creeping thyme features deep green foliage and has a soft scent of lemon when stepped on. It makes a striking lawn substitute.</p> <p>Environment: Full-sun Soil: Well-drained. Irrigation: Can tolerate dryness. Height: 0.10m high x 0.5m wide Flower: Small mauve flowers in Spring/Early summer. Maintenance: Med. Slow growing until established.</p>	<p>Viola Hederacea <i>Native Violet</i></p> <p>Sprawling plant, fast growing for shady areas.</p> <p>Environment: Part shade to shade Soil: Moist well-drained soils. Height: 0.10-0.2m high x 0.5-1m wide Flower: Small mauve flowers in Spring/Early summer. Maintenance: Low</p>	

SSG5.11 Endemic Plants

A variety of plants that are endemic to the area to support and retain local biodiversity.

Endemic plants should:

- > Be robust
- > Be endemic to specific development site

Please refer to the Suburb Selector on the Apace Nursery website listed in the *Useful Resources* section for assistance identifying endemic plants.

Appendix A.

Definitions

D1. Tree Canopy Coverage

The Tree Canopy Coverage (TCC) is the expected percentage of the development site that will be covered by canopies of trees planted on the site when they reach maturity.⁴ To calculate TCC:

- > Where tree canopies overlap, only the overlapping area of one tree's canopy can be counted;
- > Canopy overhanging public land, such as footpaths or Public Open Space, can be counted.

Note: Whichever is greater of 20% or the LGA's Urban Tree Canopy is the amount of Tree Canopy Coverage that should be met on site. The example below uses the 20% figure.

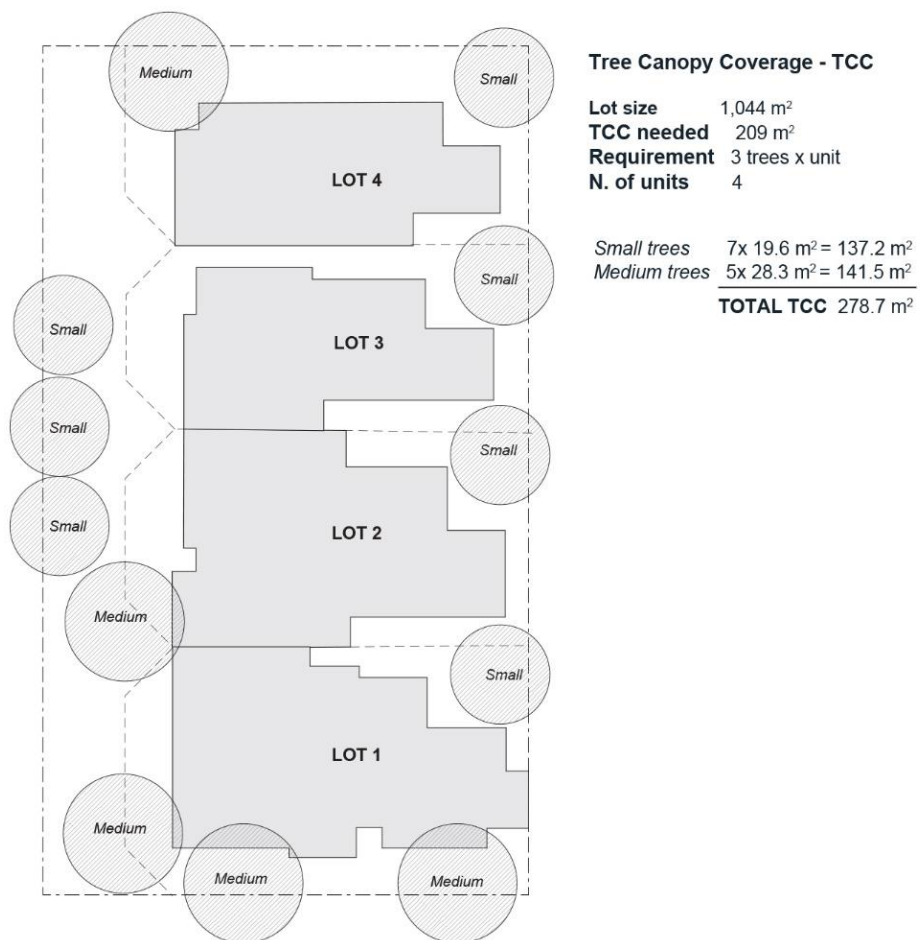


Diagram 4 Calculation of Tree Canopy Coverage Example

⁴ Size at maturity should be nominated by a knowledgeable source such as a plant nursery.

Appendix B.

Landscaping Plan Submission Criteria

A Landscaping plan should be submitted as part of the drawing package at each design stage at a minimum scale of 1:200.

Concept

1. North point and scale bar
2. Footprint of building(s) and ground levels
3. Fencing and retaining location and types
4. Extent and intention of landscaped areas in scope of works, including verge if applicable (e.g. garden bed, mulch)
5. Indicative ground surface treatment (e.g. Paving, Mulch, Garden Bed)
6. Legend identifying pot size in Litres of new trees (e.g. 45L, 90L)
7. Trees to be retained or removed with canopy width, height, and species annotated
8. Tree size category for new and retained trees (e.g. Small, Medium, Large)
9. Deep Soil Areas, Permeable Paving, and Rootable Soil Zones identified with dimensions and areas in m² for all trees
10. Distance of tree trunk away from site elements such as built form and fencing
11. Tree protection areas for retained trees (See AS 4970-2009 Protection of trees on development sites)
12. Expected mature Tree Canopy Coverage of site in m² and as percentage
13. Irrigation system and extent and location of service connections

Schematic Design

1. All items for Concept drawings, plus:
2. Landscaping categories for all trees and garden bed areas (e.g. Bird and Insect attracting, Endemic, Productive, Shade Tree...)
3. Indicative height and canopy spread at maturity for new trees

Development Application

1. All items for Concept and Schematic Design drawings, plus:
2. Legend or Planting Schedule identifying plant, tree and shrub species
3. Annotations demonstrating landscaping design intent: e.g. 'Large Shade Tree – Large evergreen tree provides shade over driveway'. See *Sample Landscaping Plan on following page*
4. Images of proposed species

Note: Other requirements as determined by relevant Local Government Authority or Planning guidelines apply.

Sample Landscaping Plan

The landscaping plans on the following pages are good examples of how to communicate Development Application requirements 2, 3, and 4.

LANDSCAPE - OVERALL PLAN + CORE IDEAS

COMMUNITY BENEFIT, THRESHOLD, SHARED & PRIVATE SPACE

The landscape design at 81 Cartright Road, Belgis will provide a pleasant landscaped entry statement for the new residential development, situated within an established area adjacent to the Cartright Hewett Reserve.

The landscape is made of three elements; the expansive verge area, the shared driveway and the private courtyard gardens. The large verge lawn area will be shaded with dappled light from the Delonix tree and provide some space for play for the inhabitants and surrounding neighbours. The Delonix tree will be selected and installed as larger specimen providing a mature aspect to the landscape upon first glance.

The shared driveway is softened in three ways; with low planting to the edges, trees to both sides and also by the inclusion of two trellis structure elements which allow climbing plants to provide additional shade. The surface material of the driveway is broken up with two materials, in situ concrete and a permeable paver for lawn or gravel. The permeable paver allows for drainage and assists with tree growth.

The individual units benefit from having private courtyard gardens which are accessed from their living spaces. Clear, simply laid out areas encourage gardening or relaxing in the outdoors. A larger deciduous shade tree and smaller feature trees provide seasonal interest with flowers and autumnal colour.

The plants and trees have been chosen to be low maintenance and for low-water usage, and chosen for their ability to thrive in the varying locations within the landscape. The verge tree can be procured early in the programme to allow for growth and certainty of a larger specimen at time of installation.

LANDSCAPE CALCULATIONS	
LOT SIZE	762 sqm
DEEP SOIL (>1m width) Min. WA Design Guidelines 10%	134.5 sqm or 17.7% of lot area
GENERAL LANDSCAPE	18.3 sqm
PLANTING ON TRELLIS	48.6 sqm
CANOPY COVER	263.6 sqm or 34.6% of lot area



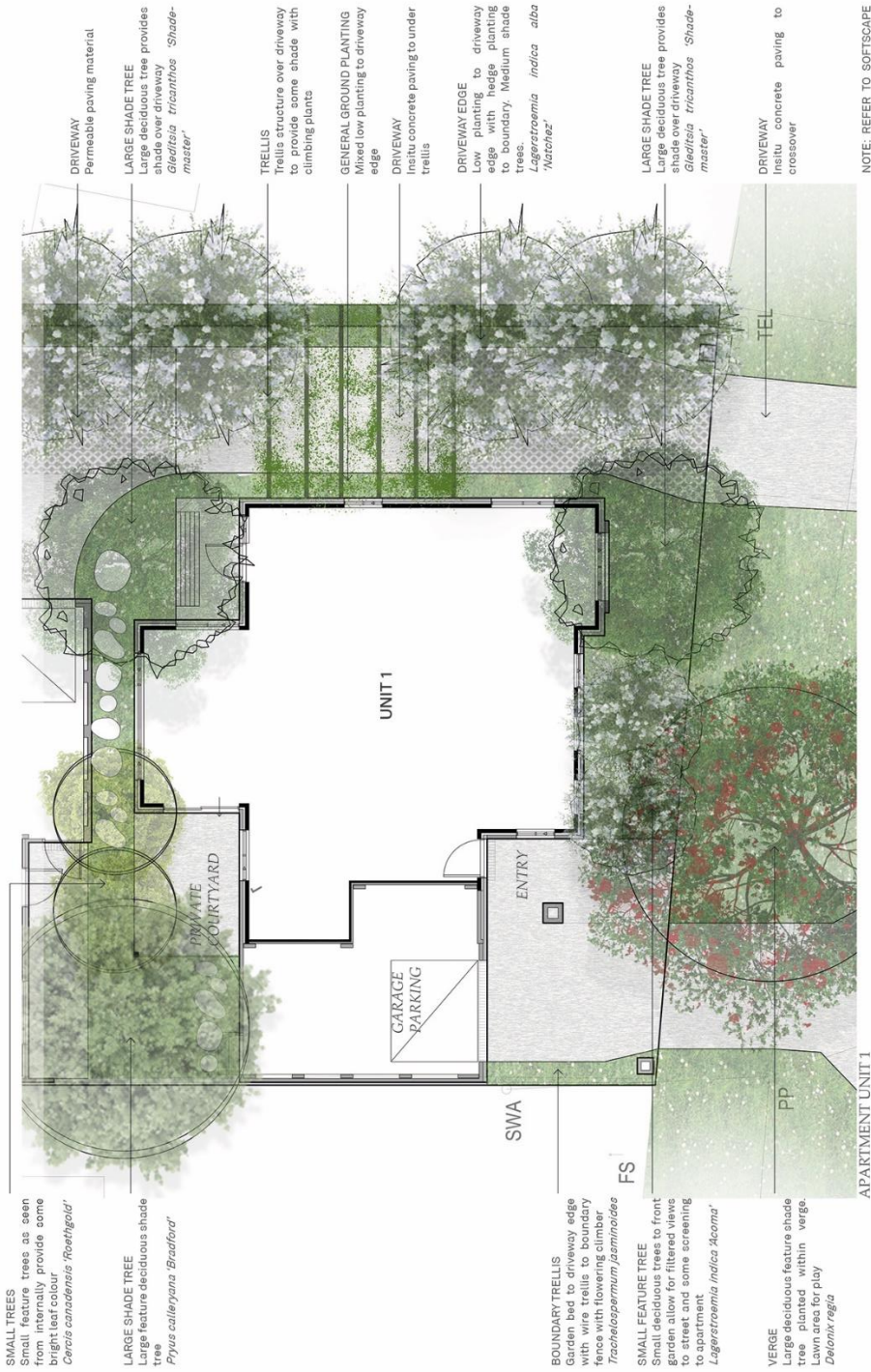
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LANDSCAPE DESIGN

SCHEMATIC STAGE

1:200 @ A3

LANDSCAPE - UNIT 1



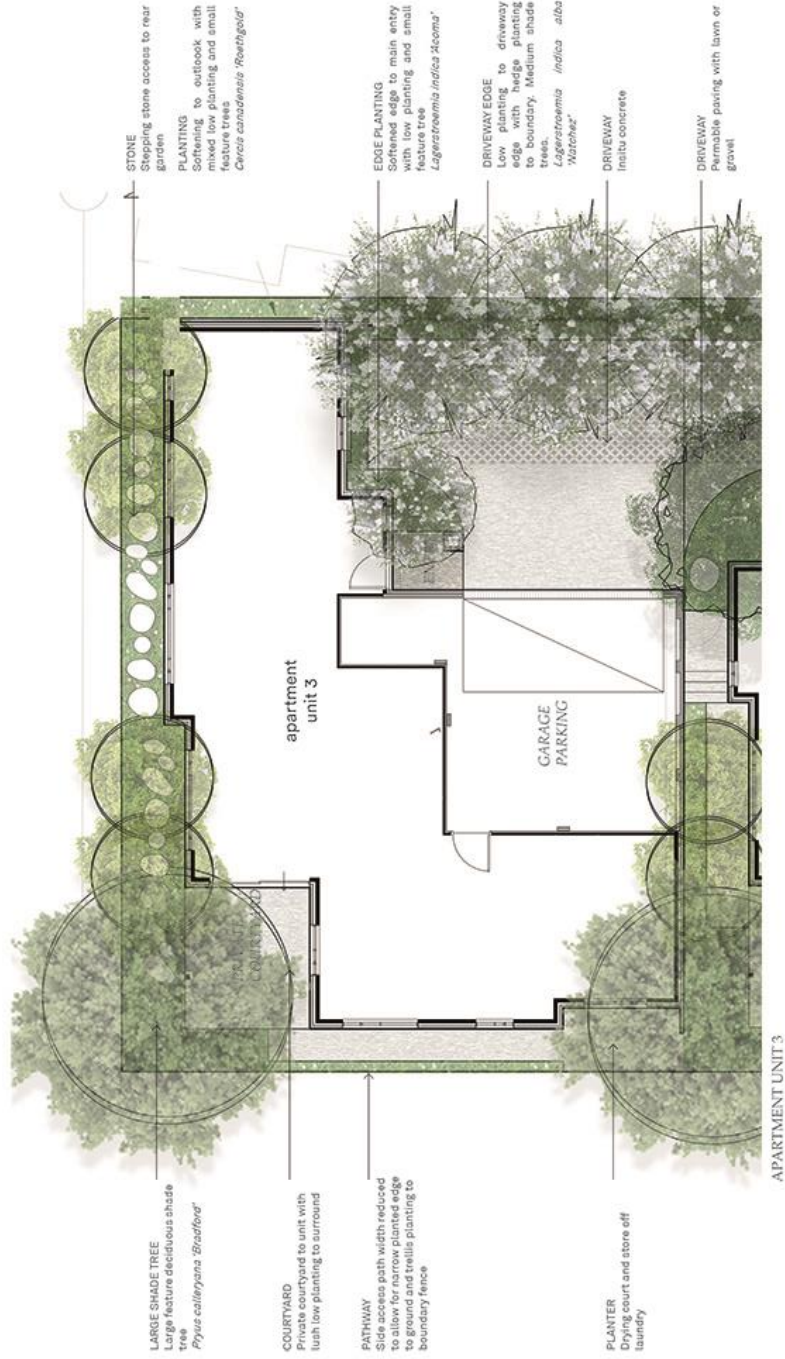
LANDSCAPE - UNIT 2



APARTMENT UNIT 2



LANDSCAPE - UNIT 3

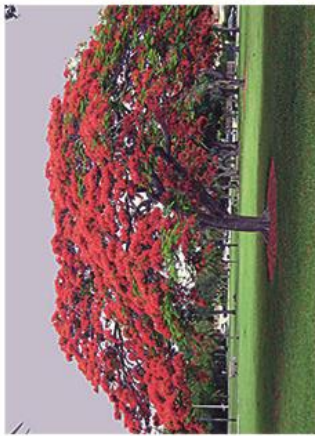


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LANDSCAPE DESIGN

SCHEMATIC STAGE

APARTMENT UNIT 3



BROAD CANOPY TREE

Delonix regia 'Royal Poinciana'
Broad spreading, deciduous dark green fern-like leaves. Red flowers from light shade. Not frost tolerant.
Soil: Rich, well drained soils (pH 6.5-7).
Irrigation: Additional water required in dry periods.
Waterwise rating: **
Height at maturity: 8m high x 7m wide.
Flower: Red/orange colour with 5 petals.
Maintenance: Pruning required in early years as branches are weak.



BROAD CANOPY TREE

Gleditsia triacanthos 'nervosa' 'Shademaster'
Graceful and pendulous style tree forming into an open rounded crown. The golden tips create a lovely contrast against a green background.
Environment: Full-sun to partly shaded position.
Waterwise rating: **
Soil: Well-drained. Irrigation: Can tolerate dryness.
Height: 8-10m x 6-8m wide.
Flower: No.
Maintenance: Low



BROAD CANOPY TREE

Pyrus calleryana 'Bradford'
A vigorous, dom-shaped medium sized tree with dense green foliage. Full-sun position. Soil: Moist conditions preferred.
Irrigation: Adequate water required.
Waterwise rating: **
Height at maturity: 10m high x 6 wide.
Flower: white flowers in early spring.
Rate of growth: Moderate



WIDE SHADING TREE

Lagerstroemia indica x *L. fauriei* 'Acoma'
Upright multi-stemmed specimen tree with a broad spreading crown, and masses of flowers. It has red-blonde autumn foliage colour and exfoliating bark which reveals a pinkish-brown under-bark.
Environment: Full-sun to partly shaded position.
Waterwise rating: **
Soil: Well-drained. Irrigation: Can tolerate dryness.
Height: 5-6m x 5m wide.
Flower: White crepe flowers in summer.
Maintenance: Medium growth



SMALL TREE

Carcra canadensis 'Reestgold Chain of Hearts'
Golden-yellow to light green foliage with the most distinctive large, heart-shaped leaf. Tight habit which makes this a perfect tree for small gardens.
Environment: Full-sun. Environment: Full-sun to part-shade.
Soil: Well-drained.
Irrigation: Water at install.
Waterwise rating: **
Height at maturity: 3.5m high x 3.5m wide.
Habit: Oval



SMALL TREE

Lagerstroemia indica x *L. fauriei* 'Acoma'
A tough, small tree for small gardens. Multi branching, low spreading, semi-pendulous branches.
Environment: Full-sun.
Soil: Well-drained, slightly acidic soils. Irrigation: Moderate.
Waterwise rating: **
Height: 4m x 3m wide.
Flower: White in summer to early autumn.
Maintenance: Slow growth



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LANDSCAPE DESIGN

SCHEMATIC STAGE

LANDSCAPE SOFTSCAPE REFERENCES

WA WATER CORP
Waterwise Rating
* Low water use
** Medium water use
*** High water use

LANDSCAPE - Softscape Palette
Shrubs and groundcovers



SCREENING / HEDGE
Viburnum coccineum 'Dense Evea'
Fine leaf and short inter-node leaves. Reddish accented new growth.
Pruning is less than common variety.
Environment: Full-sun position to partly shaded position.
Waterwise rating: **
Soil: Well-drained. Irrigation. Can tolerate dryness.
Height: 3.5m high x 2m wide
Flower: NA



BIRD / INSECT ATTRACTING
Melaleuca illi (Australian Native)
Upright shrub with fine foliage and white flowers in spring and summer.
Environment: Full-sun position with free-draining soil.
Waterwise rating: **
Height: 1.5m high x 2-4m wide.
Maintenance: Low



ADDITIONAL PLANTS
Grevillea orbiculata (Australian Native)
Dense foliage with yellow flowers in winter to spring.
Environment: Full sun to part sun in well-drained soils.
Tolerates coastal conditions.
Waterwise rating: *
Height: 2.5-4m high x 2.5-4m wide.
Maintenance: Low



ADDITIONAL PLANTS
Coriaria bushy shrub (Australian Native)
Grey foliage with yellow flowers in winter and spring.
Environment: Full sun to part-shade in all soils.
Waterwise rating: *
Height: 1m high x 1m wide.
Maintenance: Low



BIRD / INSECT ATTRACTING
Yucca filamentosa 'Dark Fusion' (Australian Native)
Flat growing groundcover with purple flowers all year.
Environment: Sun to light shade with most soil types.
Waterwise rating: **
Height: 0.2m high x 1.5m wide.
Maintenance: Low



BIRD / INSECT ATTRACTING
Calobothrium quadrangulum 'Prostrate' (Australian Native)
Coastal and windy positions. No flowers in spring and autumn.
Environment: Full-sun to part-sun with free-draining soil.
Waterwise rating: **
Height: 0.8m high x 2m wide.
Maintenance: Low. Regular compost and fertiliser.



ADDITIONAL PLANTS
Dianella brevice (Australian Native)
Dark green shrub with upright flowers in spring.
Environment: Full sun to heavy shade in well-drained soils.
Waterwise rating: **
Height: 0.6m high x 0.6m wide.
Maintenance: Low



BIRD / INSECT ATTRACTING
Grevillea orbiculata prostrate (Australian Native)
Fragrant shrub with soft, silvery-green foliage with white flowers in spring.
Environment: Full-sun with well-draining soil. Tolerates salty conditions.
Waterwise rating: *
Height: 30cm high x 2m wide.
Maintenance: Low



BIRD / INSECT ATTRACTING
Grevillea orbiculata (Australian Native)
Spring flowering shrub with red flowers year round.
Environment: Full-sun with well-draining soil. Tolerates light shade and coastal conditions.
Waterwise rating: **
Height: 30cm high x 2m wide.
Maintenance: Low



ADDITIONAL PLANTS
Linopetalum juncea 'Just High'
Coastal shrub with long, narrow foliage with white to lilac flowers in spring.
Environment: sandy to clay soils in fullsun to heavy shade.
Waterwise rating: **
Height: 0.5m high x 0.5m wide.
Maintenance: Very low



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LANDSCAPE DESIGN | SCHEMATIC STAGE | LANDSCAPE SOFTSCAPE REFERENCES

WA WATER CORP
* Waterwise Rating
* Low water use
** Medium water use
*** High water use

LANDSCAPE - Softscape Palette
Shrubs and groundcovers



ADDITIONAL PLANTS
Hibbertia scabra (Australian Native)
Very hardy groundcover or climber that will tolerate many conditions. Dark green glossy leaves with yellow flowers.
Environment: Full sun and part sun in well-drained soil.
Waterwise rating: **
Height: 0.5m high x 2m wide.
Maintenance: Low



ADDITIONAL PLANTS
Comandra Tanika (Australian Native)
Hardy plant with grass-like leaves.
Environment: Full sun and low sun. Tolerates semi-succulent ground cover with green leaves tinged with purple.
Waterwise rating: **
Height: 0.7m high x 0.6m wide.
Maintenance: Low



ADDITIONAL PLANTS
Lemnara Shara (Australian Native)
Blue-grey grass-like leaves with bracts of flowers in spring.
Environment: Full sun in sandy, loam and clay loam soils.
Waterwise rating: **
Height: 0.4m high x 0.8m wide.
Maintenance: Low



ADDITIONAL PLANTS
Philodendron Xanadu
Compact plant with glossy, lobed leaves.
Environment: Part sun to shade in well drained soils.
Waterwise rating: **
Height: 0.5-0.9m high x 0.5-0.7m wide.
Maintenance: Low



ADDITIONAL PLANTS
westringia Mundi (Australian Native)
Hardy groundcover with white flowers on grey-green foliage.
Environment: Full-sun to semi-shade in well-drained soils.
Waterwise rating: **
Height: 0.4m high x 1.5m wide.
Maintenance: Low



NOT TRAFFICABLE - LAWN ALTERNATIVE
Hemidra purgans alb - white (Shalebury) (Australian Native)
A very hardy groundcover with white flowers.
Environment: Full-sun to full shaded position. Coastal Environment.
Waterwise rating: **
Height: 20cm high x 2-3m wide
Flower: small white flower in summer.
Maintenance: Low



NOT TRAFFICABLE - LAWN ALTERNATIVE
Xyoporum parviflorum arbo - Broad Leaf (Australian Native)
A very hardy groundcover with green leaves tinged with purple.
Environment: Full sun, part sun. Salt: Tolerates wide range of soils must be well-drained. Irrigation: Water wise
Waterwise rating: **
Height: 10cm high x 1-2m wide
Flower: small white flower in summer.
Maintenance: Low



CLIMBING PLANTS
Pandorea pandorana (Wonga Wonga Vine)
Fast growing native climbing plant.
Environment: Full-sun to part shade
Soil: Well-drained. Irrigation: Can tolerate dryness
Waterwise rating: **
Height: 3m
Flower: profusion of flowers in early spring
Maintenance - Low. Trimming required



CLIMBING PLANTS
Trachelospermum Jasminoides (Chinese Star Jasmine)
An evergreen vine with thick glossy leaves, with excellent coverage.
Environment: Full-sun to partly shaded position. Semi-succulent ground cover with green leaves tinged with purple.
Waterwise rating: **
Height: 20cm high x 2-3m wide
Flower: Small perfumes white flowers in Spring/Early summer.
Maintenance: Med. Slow growing until established. Trellising required.



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SCHEMATIC STAGE

LANDSCAPE SOFTSCAPE REFERENCES

WA WATER CORP
Waterwise Rating
* Low water use
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