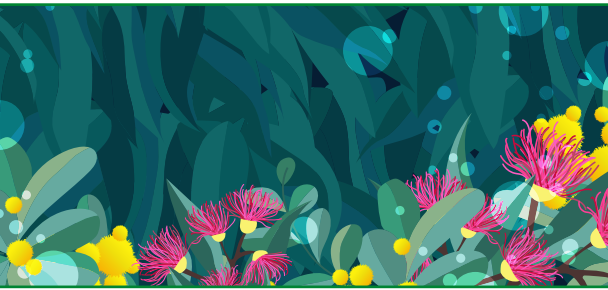




Landscaping Guidelines

for Development Applications





Purpose

This guideline is to assist proponents to prepare landscape plans and meet landscaping condition(s) specified as part of Development Applications.

Requirements

Landscape Plan

The landscaping plan submitted is to include the following at a minimum, and should be prepared by a qualified Landscape Designer or Landscape Architect:

- site address, scale, north point, site level contours, all lot boundaries and adjacent road names;
- total proposed landscaped area in square metres;
- location of buildings, car parks, retaining walls, fencing and paving;
- plant schedule showing the botanical name, quantity and pot size of each proposed species;
- plan is to clearly show the proposed location of trees, garden bed and turf areas;
- location of all plants in the schedule clearly indicated on plans;
- location and identification of all trees proposed to be retained, including location of street trees adjacent to the site;
- identification of any existing verge landscaping; and
- identification and extent of irrigation system.

The level of detail required for landscaping plans may be varied by the City on a case by case basis with consideration to the scope and nature of development being proposed.






Landscape Design

Minimum requirements for landscape design:

- all landscaping proposed to a verge area is to be in accordance with City of Kwinana Street Trees and Verge Treatments Policy;
- paving, artificial turf, bare mulch or areas of open gravel or other similar hardscape materials are not considered to be landscaping;
- landscaped areas are to be a minimum width of 1m;
- the landscape design should ensure that the root zone of retained trees is not paved, excavated or buried as per AS 4979-2009 – Protection of Trees on Development Sites;
- mulch is to be provided for all garden beds at a depth of 5-10cm. Coarse, chunky mulch is recommended;
- gravel can be used in raingardens or swales, but ensure it is a fine gravel so that it does not impede plant growth;
- if verge landscaping is proposed in accordance with relevant Local Planning Policies, and there are no existing street trees and/or gaps in street tree provision, then 100L verge trees are to be installed. The City will advise on required species and location;
- if verge parking is proposed and approved in accordance with relevant Local Planning Policies, and there are no existing street trees and/or gaps in street tree provision, then 100L verge trees are to be installed. A tree is to be provided for every three bays and located in a minimum 2m wide landscaped island. The City will advise on required species;
- the City encourages the use of waterwise native planting instead of turf;
- lawn areas are to be permanently irrigated with automatically controlled systems and establishment irrigation is required for planted areas;
- planted areas are to be biodiverse and utilise waterwise, native species;
- pot sizes are to be a minimum 130mm for groundcovers, shrubs and grasses, and a minimum of 45L for trees; and
- plants are to be provided at an appropriate density to achieve cover to landscaped areas. Generally planting is to be installed at a minimum density of 3 plants per square metre, however consideration is to be given to the mature form and size of plants.



The following can be used as a guide:

TYPE OF PLANT	PLANTING DENSITY	PLANTING TIPS
 <p>Groundcovers, small grasses and shrubs – installed to establish an understory (<i>under 1m in height</i>)</p>	2-3 plants per square metre	A diverse mixture of grasses, groundcovers and small shrubs will create landscaping with colour, texture and interest, as well as provide cover should some species fail.
 <p>Medium shrubs (<i>1-3m in height</i>)</p>	1 plant per every one or two square metres	Ensure medium shrubs are spaced so that they do not take over the garden bed and smother smaller plants, and so they do not impede vehicle or pedestrian sight lines or obstruct views desired for passive surveillance.
 <p>Large screening shrubs (<i>over 3m in height</i>) – <i>installed to screen areas and soften fencing and building facades</i></p>	Space plants at one to two metres, depending on species used	Installing a double row of screening shrubs will provide a denser screen. Ensure large shrubs are located so that they do not obstruct views desired for passive surveillance.
 <p>Trees</p>	<p>A minimum of one tree per every six bays required in car parks.</p> <p>For general landscaped areas, a minimum of one tree per 40m² of landscape area. For example if 120m² of landscaping is provided, three trees would be required.</p>	<p>Generally, trees should be installed 10 -20 metres apart depending on the mature size of the species used.</p> <p>Trees can be installed in clusters to create a more natural aesthetic, or in formal rows to frame views or provide shading for paths or roads.</p> <p>Think about areas which require shade when locating trees, such as pathways or carparks.</p>
 <p>Plants for nutrient and pollutant removal in rain gardens and biofilters</p>	4-6 plants per square metre	<p>It is very important to select the right plant species for biofilters, refer to Monash University Vegetation Guidelines for Stormwater Biofilters in the South West of Western Australia (available online).</p> <p>Refer to the City of Kwinana Landscape Development Guidelines (available on City website) for further information on planting and design for biofiltration.</p>





Design Tips

- Consider the location of landscaping in order to improve site amenity, provide natural shading, provide visual relief from built form, screen service areas, and provide buffers to adjoining sites.
- Use plant species appropriate to the local conditions and environment. Native plants are encouraged to reduce water and fertiliser usage, as well as provide food and habitat for native fauna.
- Ensure trees are located at a suitable distance from buildings, hard surfaces and boundary fences, or install root barriers to protect infrastructure if required. Ensure that the right tree is selected for the right place, and consider the mature size of the species in relation to its surroundings. Refer to the City's Tree Selection Guide and the Water Corporation Tree Selection Guide for tips on tree selection.
- Consider the ongoing water and intensive maintenance requirements of turf. Only provide turf in areas which can be feasibly maintained and with adequate access to direct sunlight, and where it may serve a purpose for employees.
- Apply principles of Water Sensitive Urban Design. Create rain gardens by directing stormwater runoff from carparks and hardstand areas into garden bed areas through use of flush paving, kerbing and rock pitching.
- Plant nutrient and pollutant stripping vegetation in rain gardens to create a biofilter. Refer to Vegetation guidelines for stormwater biofilters in the South West of Western Australia, published by Monash University.
- Consider passive surveillance requirements in relation to the location of garden beds, as well as the mature height of plant species.
- Consider the location, form and mature height of plant species so that open sight lines are maintained for vehicles and pedestrians where required.

Other resources:

Plant Selection and Verge Garden Tips:

- City of Kwinana Verge Garden Tips
www.kwinana.wa.gov.au/cityofkwinana/media/city-life/eng-is-vergegardentips.pdf
- Water Corporation Waterwise Plant Selection Guide
www.watercorporation.com.au/Waterwise/Waterwise-plants?gclid=EAlaIQobChMIrMztkZua9gIV0A0rCh0Evvgf7EAAYASAAEgLPsPD_BwE
- Monash University Vegetation guidelines for stormwater biofilters in the South West of Western Australia
watersensitivecities.org.au/wp-content/uploads/2016/07/381_Biofilter_vegetation_guidelines_for_southwestWA.pdf

Tree Selection Guides

- Water Corporation:
www.watercorporation.com.au/Help-and-advice/Waterwise/Garden/Selecting-the-right-tree
- City of Kwinana
[www.kwinana.wa.gov.au/council/documents-publications-and-forms/publications-and-forms-\(all\)/information-sheets-and-guides/2021/city-of-kwinana-tree-selection-guide](http://www.kwinana.wa.gov.au/council/documents-publications-and-forms/publications-and-forms-(all)/information-sheets-and-guides/2021/city-of-kwinana-tree-selection-guide)

