

8. ECO-INFO - TREE PLANTING IN URBAN AREAS

Edited July 2006

Trees can enhance the appearance of any home or public area. To achieve this beauty, trees, like people, require responsible care during their early years. Attention to proper placement and planting will enable you to grow attractive, healthy trees which will provide years of enjoyment.

What is the streetscape?

The streetscape is a very important part of our urban landscape. It includes the *street*, the *nature strip* and the *front setback* to each house, (the traditional 'front yard') on either side of the street.

The nature strip is a pedestrian zone, but it must also contain services such as sewer, water, gas, electricity, street lighting and telephone. It is therefore public property, but responsible home owners ensure it is maintained.

The nature strip is an important part of the streetscape because it is the traditional place to plant shade trees and because the presence of trees in the nature strip helps to unify the streetscape, creating a more pleasant place to live.

Streetscape trees provide benefits to all

The value of well established streetscape trees can translate to economic and amenity benefits to homes, street users and to tourism. Streetscape trees can improve the general atmosphere, appearance and character of a street making it a more comfortable and amenable place in which to live or to visit.

- Trees reduce noise pollution by acting as sound barriers and reduce air borne pollution by trapping particles on their leaves.
- Trees provide shade and shelter, reducing annual heating or cooling costs.
- Trees keep our air supply fresh by absorbing carbon dioxide and producing oxygen.
- Trees provide food and shelter for wildlife.

Selecting a location

CAUTION: Always seek the advice of Council's Parks and Open Space Section before planting trees on the nature strip or on a median, as there are many factors that have to be considered in terms of public safety, essential services and road design.

As a general rule, trees should be placed so that they may develop freely without crowding each other, the house, power lines or other structures. It always pays to discuss possible tree locations with neighbours who might be affected as the tree grows.

Before selecting an exact spot for a tree, determine its mature size by consulting a nursery, plant catalogue, garden book or government service such as the Royal Botanic Gardens, Sydney, State Forests or the NSW Department of Primary Industries (Agriculture).

Many round-headed trees grow about as wide as they grow tall, so if figures for width are unavailable, estimate from the ultimate height. *For example, a tree that grows between 3 and 5 metres tall will commonly spread its branches about the same distance.* Such trees should therefore be planted about 2.5 to 3 metres away from houses and other structures.

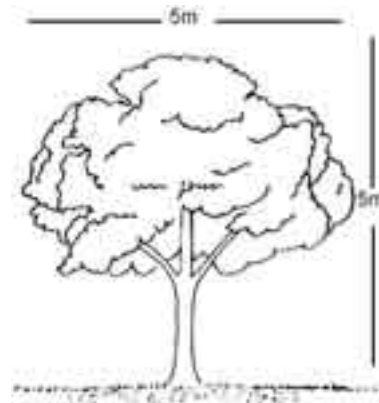


Diagram of Tree Size

You can decrease future maintenance problems by careful placement of trees.

For advice in choosing the 'right tree' for the 'right place', consult your garden centre staff, a horticulturist, or a tree care professional such as an arborist.

What tree species are suited to streetscape planting?

The nature strip imposes many restrictions on the species that can be used, but there are far less restrictions to planting trees in front yards. *Remember, always seek the advice of Council before planting in the nature strip.*

A list of species suited to the Wyong area is included at the end of this sheet. When using the list, be aware that there may be local site conditions to consider before making the final choice. Such conditions may include clay or sandy soils, slow or rapid drainage, soil compaction, localised flooding, wind exposure, salt laden air and vandalism.

Choosing a healthy tree

Biggest is not always best. If the plant is excessively tall compared to the size of the container and/or the specimen falls over when the main stem is lightly pushed or bent to one side, it is likely the plant has outgrown the container and is *pot bound*. Pot bound specimens have developed a spiral or circling root system with brown woody roots instead of soft white shoots. These specimens will not usually develop into a healthy specimen and will be slow growing.

Planting the tree

CAUTION: When handling your tree in its container, *always pick up the tree by the container, not by the trunk.*

The ideal time to plant most trees is in the autumn, as the soil is still warm, but temperatures are mild. The cool weather allows plants to establish roots in their new location before the spring heat stimulates new growth. Deciduous trees are best planted during the winter dormancy period, however if the tree has been properly cared for in the nursery, it is possible to plant throughout the growing season. Proper planting is essential to ensure a healthy future for new trees.

Take time to follow these simple steps which apply to any tree, whether in a container, bare rooted or seedling.

Dig a large planting hole

CAUTION: *Be sure you have had all the underground services located prior to digging.*

Dig the planting hole as deep as the root ball and twice as wide. Loosen the planting hole sides to assist the roots to penetrate and establish.

If you are digging into grass or lawn, discard the grass as even small pieces will compete strongly with the new tree. Do not place grass in the planting hole.

Prune sparingly

Examine the tree closely for injury to roots and branches. Crushed roots should be cut at a point just in from the damaged area. On the top, prune only the broken branches, making sure to leave the branch collar (swollen area where one branch meets another) intact. If twin-trunked, remove the secondary trunk to create a stronger tree form.

Prepare the hole and soil

In most cases, the existing site soil is the best material to backfill with. Wherever possible, avoid using rich garden loams, topdressing or potting mixes as backfill. *Never apply fertiliser high in nitrogen at planting time. It may burn tender roots.* Avoid fertilising until the tree is established. Often, the fertiliser placed at planting time is used by weeds that are stimulated by your digging.

Place the tree at proper height

Set the tree in the hole. *Avoid lifting it by the trunk.* Add enough site soil to the hole to fill to the tree's original growing level.



Set the tree at the correct height

This level can be seen as a dark stain on the trunk which marks the difference between root and trunk bark. *Planting at the proper depth is important. If set too deep, roots suffocate and if set too shallow, roots dry out.*

Fill the hole gently, but firmly

If the root ball is wrapped in hessian, cut the string and remove as much of the hessian as possible. Fill the hole by gently firming the soil around the tree to hold it in place and to remove the larger air pockets. Air pockets are created by backfilling with large unbroken soil clods. Ensure these are either broken up or discarded.

Settle the soil with water and add soil until the tree is firm in the ground. *Do not use your feet to tamp around the tree base; this compacts the soil and inhibits the spread of roots.* Rake a ridge of soil 50 to 75mm high around the margin of the hole, just to the outside of the root area to serve as a reservoir when watering.

Only stake the tree if absolutely necessary

Staking commonly causes bark damage as well as a number of other serious problems for your tree.

If the trunk is not well formed, it will need some support in the short term to avoid shifting during heavy rain or wind, as excessive movement can destroy new fine roots.

Staking must be done carefully. *Avoid placing a stake into the rootball.* Use wooden stakes in preference to steel posts.



Staking the tree

Tie the tree using soft material only. Strips of hessian are best but stocking or other cloth materials are suitable. Hessian is preferred because it breaks down in a few months, so it won't prevent the trunk from expanding as the tree grows. *Never use wire, even if wrapped in plastic hose, as it will cut into the tender bark.*

Mulch the base of the tree

Mulch is simply an organic material applied to the area at the base of the tree. Good choices for mulch include leaf litter, woodchip, pine flake, peatmoss and garden compost. A 75-100mm layer conserves soil moisture and protects roots from heat and cold.



Mulch the base of the tree

Mulch assists in the build-up of natural soil bacteria and soil organisms that in turn assist in healthy root development.

Mulch also helps to keep down weeds that would otherwise compete for water and nutrition until the tree takes a firm hold.

Water regularly

Since most trees are planted from nursery grown stock where water and nutrients are closely controlled, your newly planted tree will be used to a regular supply of these essentials. Regular and timely watering is therefore essential in the first 6 to 8 weeks from planting of small trees and up to 12 weeks from planting of small trees and up to 12 weeks or more for larger trees.

When watering, fill the planting trough, then allow a few days before watering again rather than giving the tree frequent light sprinklings.

Keep the soil moist, but not soaked as over-watering will cause the leaves to yellow or fall off.

Continue to add water for at least 6 weeks to 12 weeks, then taper off to allow the tree to use the surrounding soil under natural rainfall conditions.

Now that you have completed these steps, further routine care and favourable weather will ensure that the new tree will grow and thrive, providing a long-lasting source of beauty and enjoyment for all.

If you have any questions about street trees or removing a tree, please contact Council's Customer Service Staff on (02) 4350 5555.

URBAN TREES

Trees that have been successfully grown in Wyong.

Species shown to be highlighted are suitable for your property (where applicable).

AUSTRALIAN TREES: Locally Occurring Species

COMMON NAME:	SCIENTIFIC NAME:	APPROX SIZE Height x Width:	SOIL KEY:	COMMENTS:
Coast Myall	<i>Acacia glaucescens</i>	4 x 4	2, 3	salt wind tolerant, silver/grey foliage & black trunk
Lilly Pilly	<i>Acmena smithii</i>	8 x 5	2, 3	not under power lines, summer flowers & white berries
Red Ash	<i>Alphitonia excelsa</i>	8 x 5	2, 3	not under power lines, leaves silver underneath
Forest She-oak	<i>Allocasuarina torulosa</i>	15 x 5	2	drought resistant but susceptible to frosts, do not plant under power lines
Black She-oak	<i>Allocasuarina littoralis</i>	10 x 5	2, 3	drought, frost and salt spray resistant
Sydney Red Gum	<i>Angophora costata</i>	10 x 6	1, 2, 3	not under power lines, native resource tree, red bark
Rough Barked Apple	<i>Angophora floribunda</i>	8 x 5	2, 3	not under power lines, native resource tree
Coast Banksia	<i>Banksia integrifolia</i>	6 x 3	3	salt wind tolerant, attracts honeyeaters & parrots
Old Man Banksia	<i>Banksia serrata</i>	6 x 3	3	salt wind tolerant, attracts honeyeaters & parrots
Kurrajong	<i>Brachychiton populneus</i>	12 x 5	2, 3	open, sunny position
Willow Bottlebrush	<i>Callistemon salignus</i>	6 x 4	2	sap suckers may cause sooty mould, cream flowers
Swamp She-Oak	<i>Casuarina glauca</i>	15 x 5	1, 3	lakefront, saline or brackish soils, do not plant under power lines
Christmas Bush	<i>Ceratopetalum gummiferum</i>	6 x 3	2, 3	protected, sunny position, do not plant under power lines
Spotted Gum	<i>Corymbia maculata</i>	18 x 6	1, 2	do not plant under power lines, native resource tree
Brown Beech	<i>Cryptocarya glaucescens</i>	25 x 4	1, 2	protected, sunny position
Tuckeroo	<i>Cupaniopsis anarcardioides</i>	6 x 6	2, 3	glossy dense foliage, good shade tree
Sassafras	<i>Doryphora sassafras</i>	25 x 4	1, 2	protected, partially shaded position, do not plant under power lines
Hard Quandong	<i>Elaeocarpus oboratus</i>	20 x 6	1, 2, 3	drought and frost resistant, prefers shade
Blueberry Ash	<i>Elaeocarpus reticulatus</i>	9 x 4	2, 3	do not plant under power lines, attractive blue fruit
White Mahogany	<i>Eucalyptus acmeniodes</i>	25 x 6	1, 2	protected, sunny position, do not plant under power lines
Brown Stringybark	<i>Eucalyptus capitellata</i>	20 x 5	2, 3	prefers shallow soils, sunny position, do not plant under power lines
Yellow Bloodwood	<i>Eucalyptus eximia</i>	15 x 5	2	open, sunny positions, Hawkesbury sandstone soils, do not plant under power lines
Thin-leaved Stringybark	<i>Eucalyptus eugenioides</i>	20 x 5	2	poor, well drained soils, do not plant under power lines
White Stringybark	<i>Eucalyptus globoidea</i>	30 x 5	2, 3	sandy, well drained soils, sunny position, do not plant under power lines
Scribbly Gum	<i>Eucalyptus haemastoma</i>	10 x 5	2, 3	small local gum, attractive smooth bark
Woollybutt	<i>Eucalyptus longifolia</i>	20 x 6	2	sunny position, do not plant under power lines
Tallowood	<i>Eucalyptus microcorys</i>	30 x 8	1, 2, 3	do not plant under power lines, full or partial sun
Blackbutt	<i>Eucalyptus pilularis</i>	25 x 6	2, 3	protected, sunny position, do not plant under power lines
Grey Gum	<i>Eucalyptus punctata</i>	30 x 7	2	Open, sunny position, do not plant under power lines
Red Mahogany	<i>Eucalyptus resinifera</i>	20 x 6	2	open/semi-shaded position, do not plant under power lines
Cheese Tree	<i>Glochidion ferdinandi</i>	6 x 5	1, 2, 3	hardy, salt wind tolerant, excellent shade tree
Wild Quince	<i>Guioa semiglanca</i>	8 x 3		plant in protected, sunny positions
Narrow Leaved Paperbark	<i>Melaleuca linariifolia</i>	5 x 4	1, 2	flowers attract insects for wildlife resources

COMMON NAME:	SCIENTIFIC NAME:	APPROX SIZE Height x Width:	SOIL KEY:	COMMENTS:
Broad-leaved Paperbark	<i>Melaleuca quinquinervia</i>	20 x 5	1, 3	sunny position, drought and salt tolerant, do not plant under power lines
Prickly Paperbark	<i>Melaleuca styphelioides</i>	6 x 4	1, 2	do not plant under power lines
Plum Pine	<i>Podocarpus elatus</i>	20 x 5	1, 2	protected, moist shady position, , do not plant under power lines, attracts birds
Turpentine	<i>Syncarpia glomulifera</i>	12 x 6	2, 3	do not plant under power lines, stately tree, wind firm
Brush Cherry	<i>Syzygium australe</i>	5 x 4	2, 3	small tree, dense form, purple fruits, glossy leaves
Blue Lilly Pilly	<i>Syzygium oleosum</i>	7 x 5	2, 3	attractive new growth
Magenta Lilly Pilly	<i>Syzygium paniculatum</i>	10 x 5	2, 3	do not plant under power lines, threatened species
Water Gum	<i>Tristaniopsis laurina</i>	6 x 4	1, 2, 3	very hardy and popular, small yellow flowers in summer
Waterhousea	<i>Waterhousea floribunda</i>	10 x 6	2, 3	weeping tree, do not plant under power lines

AUSTRALIAN TREES: All States

Willow Myrtle	<i>Agonis flexuosa</i>	7 x 5	3	weeping tree, from WA, coastal wind tolerant
Plunkett Mallee	<i>Eucalyptus curtisi</i>	5 x 3	2, 3	small gum, flowers heavily, attracts parrot family
Mugga Ironbark	<i>Eucalyptus sideroxylon "rosea"</i>	12 x 5	2, 3	do not plant under wires, pink flowers, black bark, coastal tolerant
Queensland Brush Box	<i>Lophostemon confertus</i>	12 x 6	1, 2, 3	do not plant under wires, very hardy and stable tree
Diamond Leaved Laurel	<i>Pittosporum rhombifolium</i>	7 x 4	2, 3	do not plant under wires, orange berries, white flowers, glossy leaves
Small Leaved Lilly Pilly	<i>Syzygium leuhmannii</i>	8 x 5	2, 3	do not plant under power lines, new foliage starts as purple
Golden Denda	<i>Xanthostemon chrysanthus</i>	10 x 3	2	tolerant of coastal conditions and salt winds

INTRODUCED TREES: Deciduous and Evergreen

Cape Chestnut	<i>Calodendron capense</i>	8 x 6	2, 3	not under power lines, compact form, pink flowers
Fiddlewood	<i>Cytherexylon spinosum</i>	12 x 6	2, 3	not under power lines, leaves colour early summer
Evergreen Ash	<i>Fraxinus griffithii</i>	6 x 5	2, 3	cream coloured flowers, attractive round headed tree
Claret Ash	<i>Fraxinus oxycarpa "Raywood"</i>	7 x 5	2, 3	not under power lines, deciduous tree
Gordonia	<i>Gordonia axillaris</i>	6 x 6	2, 3	slow growth but long lived, neat round canopy
Golden Rain Tree	<i>Koelreutaria paniculata</i>	6 x 4	2, 3	coastal tolerant, not under power lines
Ornamental Pear	<i>Pyrus calleryana</i>	6 x 4	2	spring blossom, autumn colour, not under power lines
Manchurian Pear	<i>Pyrus ussuriensis</i>	6 x 4	2	spring blossom, autumn colour, not under power lines
Chinese Tallow Tree	<i>Sapium sebiferum</i>	6 x 5	2, 3	best autumn colour on coast, not under power lines
Chinese Elm	<i>Ulmus chinensis</i>	6 x 6	1, 2	weeping form, hardy tree, attractive bark

- SOILS KEY:**
- 1** Low lying and flat lands subject to periodic flooding and seasonally high water tables. Drainage is generally slow so species selections are restricted. Includes low-lying parts of Bateau Bay, Blue Haven, Budgewoi, Chain Valley Bay, Charmhaven, Chittaway, Gwandalan, Gorokan, Kanwal, Mardi, Mannering Park, North Wyong, Ourimbah, San Remo, Summerland Point, Tuggerah, Tumby Umbi, Watanobbi, Warnervale, Wadalba.
 - 2** Slopes and ridges in all of the suburbs given in 1 above.
 - 3** Sands and loamy sands which are infertile and rapidly draining. With irrigation and careful use of fertilisers, these soils will support most tree species. Suburbs include Bateau Bay East, Budgewoi, Canton Beach, Long Jetty, Noraville, Toukley, The Entrance, North Entrance.