

Trees for urban spaces

LONG LIVED, CLIMATE TOLERANT TREES AND SHRUBS ARE KEY INGREDIENTS IN A RESILIENT, HARDWEARING GARDEN THAT LOOKS GREAT ALL YEAR ROUND.

When the air cools down and soil moisture is back on the rise, planting time begins for trees and shrubs.

During a deluge, their deeply penetrating roots will soak up excess water, helping to slow the flow of flood water and putting the brakes on excessive soil loss.

And when the weather turns hot and dry and watering restrictions take force, the deeper reaching roots of trees and shrubs make the most of any moisture that lies deep down in the soil. Once established, most trees can survive with only the water that falls from the sky.

As they mature, trees create microclimates for smaller garden treasures that need shade or shelter. In a warming climate trees are playing an increasingly critical role in keeping people cool too. They also provide a habitat for birds, insects

and essential soil organisms that help keep the soil - and the planet - healthy.

In many parts of the country autumn is a great time to plant. In other regions where summer has parched the soil and drying winds still prevail, it is better to delay planting until winter unless you are able to keep up with frequent deep watering.

In the meantime, garden centres are stocking up with new season's trees and shrubs. It's time to plan and prepare for planting - and place an order for something special.

It is important to choose trees that thrive in your garden's climate and soil, as well as serving their purpose in providing human comforts. Deciduous trees, for example, offer summer shade then let the sun through in winter.

New Zealand native evergreens are among the toughest shelter screens.

When purchasing trees for planting, big is not necessarily better. The larger the tree, the harder it is for it to establish after planting and the more watering it will need. Often, a smaller plant will outgrow a larger one planted at the same time.

Water trees thoroughly before planting, then dig a planting hole twice as wide and the same depth as the tree's roots. Remove the pot or planter bag and gently loosen the roots. Trees that have outgrown their pots are often root-bound; their roots circling around the pot and matted at the base. Lightly shave the root ball to trim off any circling or matted roots. Water again thoroughly after planting to make sure the soil is sitting snugly around the roots. Apply mulch around the tree to help retain moisture and insulate the soil.



ABOVE: Weeping elm, *Ulmus glabra* 'Pendula' in Jenny Oakley's Taranaki garden; Magnolia 'Genie'; Liquidambar 'Gumball' in Mark Boyd's Auckland garden; Cercis 'Forest Pansy'; Columnar crabapple, *Malus Ballerina* 'Maypole'.



Silver pear *Pyrus salicifolia* 'Pendula' in Mark Boyd's Auckland garden.

TREES FOR TOWN-SIZED GARDENS

FEATURE TREES

Acer (Japanese maple)
Backhousia citriodora (lemon myrtle)
Camellia
Cercis
Cornus (dogwood)
Cotinus (smoke bush)
Ginkgo fastigiata (column ginkgo)
Ginkgo 'Jade Butterflies' (dwarf maidenhair)
Koelreuteria paniculata (golden rain tree)
Lagerstroemia (crepe myrtle)
Liquidamber 'Gumball'
Magnolia
Malus (crabapple)
Prunus (flowering cherry)
Robinia pseudoacacia 'Lace Lady'
Ulmus glabra 'Pendula' (weeping elm)
Viburnum

DECIDUOUS SHADE UMBRELLAS

Acer (Japanese maple)
Gleditsia 'Ruby Lace' (purple honey locust)
Jacaranda
Malus floribunda (crabapple)
Robinia pseudoacacia 'Frisia'
Melia azedarach (Indian bead tree)
Prunus (flowering cherry)
Pyrus salicifolia 'Pendula' (silver pear)

TREES FOR NATIVE BIRDS

Abutilon (Chinese lantern)
Alectryon (titoki)
Aristotelia (makomako, wineberry)
Banksia
Callistemon (bottle brush)
Corokia
Leptospermum (manuka)
Sophora (kowhai)
Pittosporum
Metrosideros (pohutukawa)





Urban forests for greener futures

The science is clear; trees cool the air. They do this by shading and also via transpiration; the natural process of releasing the water they've absorbed from the earth back into the atmosphere. Trees are essential to our survival, not least in urban areas, where most people live.

But as our towns and cities grow, the trees so vital to human wellbeing are increasingly at risk. There is an urgent need to slow the loss of existing trees while protecting the space needed for planting new trees.

Urban forest expert, Associate Professor Justin Morgenroth of The University of Canterbury says, "Studies have conclusively shown that trees cool local air and land surface temperatures, in some cases by tens of degrees! The importance of this can't be overstated in cities where temperatures are elevated by dark impervious surfaces, like pavements and buildings. Compounded with climate change, this so-called urban heat island effect will ensure our cities see much hotter summers ahead."

Justin says one of the biggest obstacles hindering tree planting in cities is a lack of easily plantable space. "As cities develop and we cover soils with impervious pavements and buildings, land that's most easily planted with trees disappears," says Justin.

"Planting trees in highly developed environments requires greater management inputs and considerably deeper pockets. Some cities in Europe, Asia, and the US are undertaking de-paving to retrofit their cities with trees where grey infrastructure (like pavements) dominates. These cities recognise the immense benefits of trees, but are having to pay a steep cost to plant them."

All this feels somewhat overwhelming to a humble kiwi gardener, but how can we as individuals help? Justin urges us to talk to our local decision makers and politicians about the value of trees and why we should be prioritising them in our rapidly urbanising centres. "They need to hear that their constituents value liveable neighbourhoods with

"Trees are green infrastructure. Unlike grey infrastructure, they generally provide more benefits the older they get."

Vince and Ann Naus's
New Plymouth garden.

healthy urban forests,” he says. “Trees are green infrastructure. Unlike grey infrastructure, they generally provide more benefits the older they get.”

Justin supports density in built environments but says this puts greater pressure on remaining common areas to provide green spaces for dense neighbourhoods. “Density done poorly leads to loss of green space, soil sealing, and extremely challenging conditions for any new tree plantings. I think it’s critically important to maintain large connected communal areas for urban trees and green spaces.”

In the face of climate change, what kinds of trees should we be planting? Justin expects we’ll see some changes. In our cities, both natives and exotics are important given the huge variety of sites, environmental conditions, and planting objectives. “Many native species have evolved to tolerate prolonged wet or dry conditions and there are plenty more exotics available throughout NZ’s nurseries that can do the same,” he says. 🌱



Justin Morgenroth

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