FACTSHEET

How vegetation can cool your home

Establishing shade trees on your property now will help your home and garden stay cool during the hotter and longer summers that are expected as the climate warms.

Trees and shrubs reduce heat gain in our homes by blocking the sun and cooling the air, keeping us comfortable and reducing air conditioning costs. Trees also provide other benefits, such as storing carbon, providing privacy and windbreaks, filtering pollutants, providing food and habitat for wildlife, and beautifying a space.

Eastern suburbs climate change

By 2030 the eastern suburbs will experience one extra month of warm weather (over 25^{o}C) per year. By 2070, we will be experiencing an extra three months of warmer weather.

Best planting position for summer cooling and winter solar warmth

Almost 90% of heat in your home is gained through windows and glass, followed by uninsulated roofs and walls. Shrubs can be used to shade windows and walls, whilst trees with tall canopies provide shade for your roof. Planting ground covers instead of paving will help to lower the surface temperature on the ground.

To effectively position shade trees and shrubs, you need to consider the orientation of your site and dwelling in relation to the path of the sun throughout the day.

North: Planting **deciduous trees or vines** grown on pergolas/trellis on the north side will provide shade from the high midday summer sun and allow the winter sun through to warm your home.

South: **Evergreen trees** can be planted on the southern side as they will not block winter sun and will provide a windbreak. Summer outdoor living areas are well placed on the south side of the house where it is coolest.

East: Shade to the east with small trees and shrubs to protect from low-angled sun. **Evergreen or deciduous** trees can be used.

West: West sun angles are low and add the most heat to buildings. Shade western aspects with **tall evergreen trees and shrubs.**

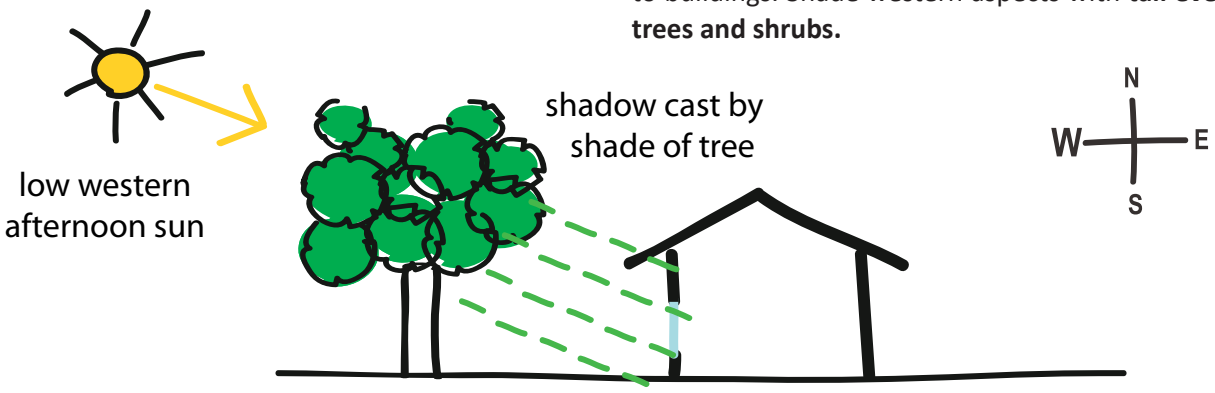

Figure 1: Shade trees and shrubs can be used to shade western (and eastern) windows and walls from low angled sun in summer

This project has been assisted by the New South Wales Government and supported by Local Government NSW, and our council partners.

FACTSHEET

How vegetation can cool your home

Which plants will grow best in a warming climate?

The following list includes evergreen species for Sydney's eastern suburbs that are expected to survive and thrive in our local coastal climate and soils.

Common name	Botanical name	Type
Tuckeroo	*Cupaniopsis anacardioides*	Tree
Firewheel Tree	*Stenocarpus sinuatus*	Tree
Illawarra Flame Tree	*Brachychiton acerifolius*	Tree
Lilly Pilly	*Acmena smithii*	Tree
Lemon Scented Myrtle	*Backhousia citriodora*	Tree
White Aspen	*Acronychia oblongifolia*	Tree
Black Wattle	*Callicoma serratifolia*	Shrub/tree
Bracelet Honeymyrtle	*Melaleuca armillaris*	Shrub/tree
Blueberry Ash	*Elaeocarpus reticulatus*	Shrub/tree
Heath Leafed Banksia	*Banksia ericifolia*	Shrub/tree
Coastal Tea tree	*Leptospermum laevigatum*	Shrub/tree
Scrub She-Oak	*Allocasuarina distyla*	Shrub/tree
Coastal Rosemary	*Westringia fruticosa*	Shrub
Climbing Guinea Flower	*Hibbertia scandens*	Climber/groundcover
Wonga Wonga Vine	*Pandorea pandorana*	Climber
Pigface	*Carpobrotus glaucescens*	Groundcover
Cut-leafed daisy	*Brachyscome multifida*	Groundcover
Australian Bindweed	*Convolvulus erubescens*	Groundcover
Blue Flax-Lily	*Dianella cerulea*	Groundcover
Spiny Mat-rush	*Lomandra longifolia*	Tall clumping grass
Weeping Grass	*Microlaena stipoides*	Grass (e.g. turf)
Kangaroo Grass	*Themeda triandra*	Grass (tussock)

Table 1: Native shade trees, shrubs and vines/groundcovers suitable to 2070 in the Eastern Suburbs (Source: Whichplantwhere.com)

No room on your site?

If your block is too narrow, but there is sufficient room on the verge, you can request a street tree from Council. Click here to make a request.

Alternatively, explore other shading options for your house, including external louvres, pergolas with adjustable shade cloth, window and door awnings, and high-performance glazing.

Being water smart

There are simple ways to optimise water use on site:

- Choose local native plant species with low water requirements where possible.
- Plant an understorey of groundcover and mulch to reduce moisture loss from the soil, and consider ways to increase the water holding capacity of the soil, such as biochar.
- Build garden swales to collect and hold rainfall for use onsite or a raingarden to slow and filter stormwater before it enters our waterways
- Install a rainwater tank to collect water and help to irrigate your garden, and consider efficient watering systems such as drip irrigation with a smart control system.
- Water early in the morning so plants have enough water to keep themselves cool during the heat of the day.