

# Reducing Heat Gain By Effectively Shading Your House With Vegetation

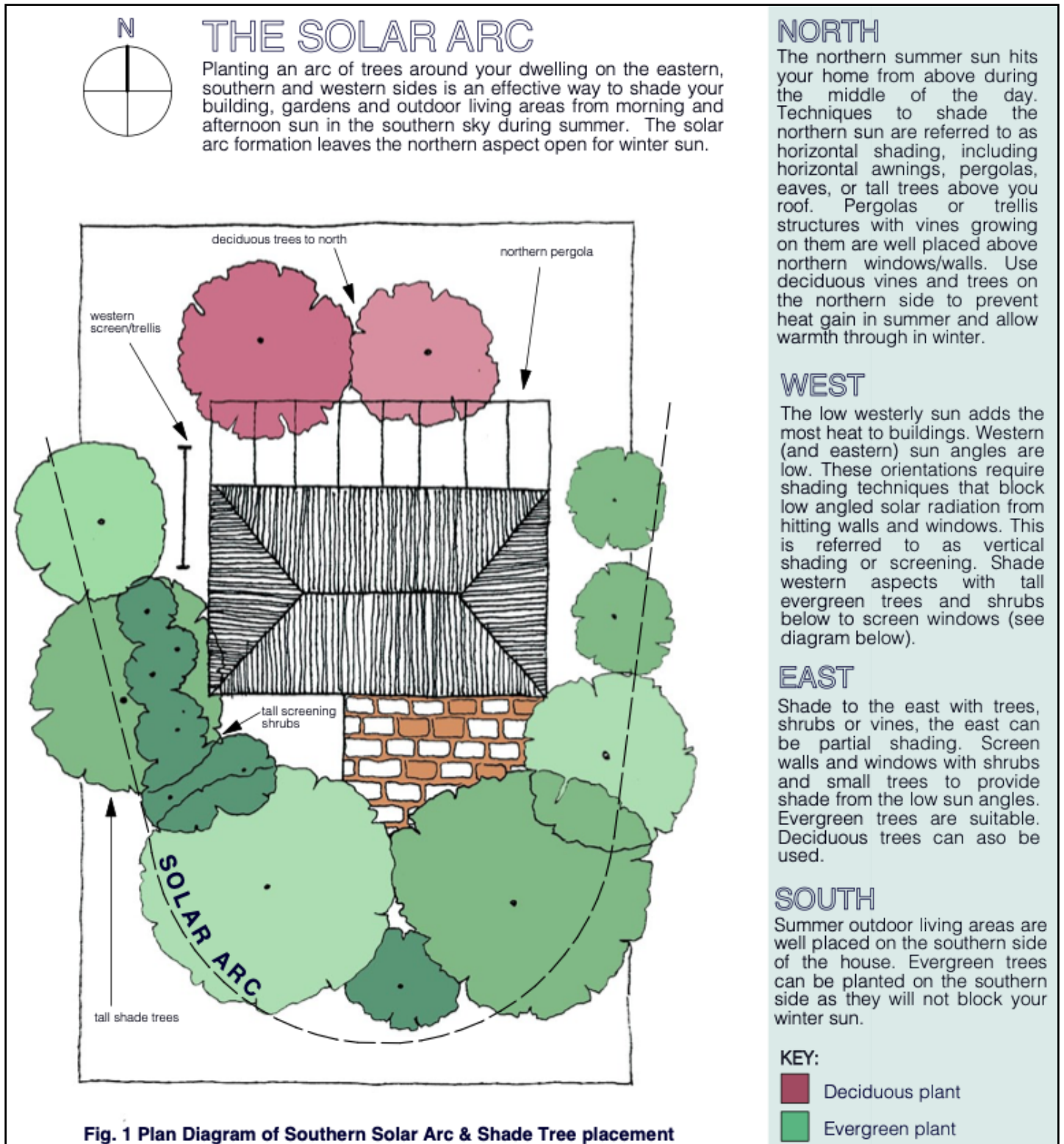
By effectively shading your dwelling with plants you can reduce summer temperatures around the house, minimise energy consumption and increase comfort.

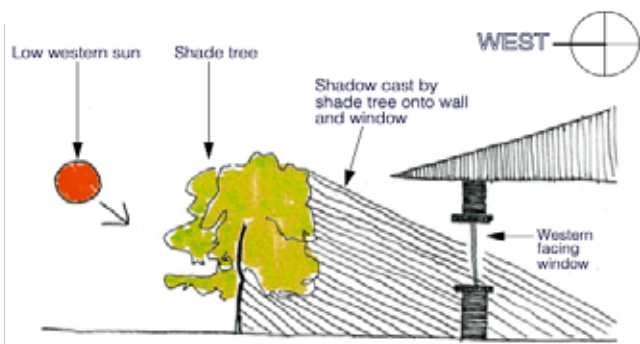
## What parts of my home should I shade?

The most important parts of a building to shade are windows and glass, where up to 87% of heat is gained (Your Home, 2017). Secondly, shade uninsulated walls and roofs. Finally, shading pergolas, outdoor living areas, carports and concrete slabs helps lower temperatures on the ground.

## How do I effectively position shade trees or shrubs?

To effectively position shade trees and shrubs you must firstly understand the orientation of your site and dwelling in relation to the path of the sun throughout the day. Each orientation requires specific kinds of shading in order to establish effective cooling.





**Fig. 2: Vertical Shading or Screening**  
Use plants or screens to shade western (and eastern) windows and walls from low sun angles

## Other tips:

- **Breeze filtering plant placement:** In Alice Springs prominent winds tend to be from the east and south east in summer. Planting shrubs and trees at window level on this side of your house can assist in filtering and cooling wind before it reaches the house.
- **Groundcover:** Use ground cover plantings instead of paving to reduce ground temperature and reflected heat.
- Shade from trees can reduce the air conditioning costs of a typical house by up to 30% (Ennos, 2015).

## Selecting Appropriate Plant Species for Shade in Alice Springs

When selecting plant species and plant placement take into consideration factors such soil type, water availability, direct sun, and available space.

Deciduous/ Evergreen	Common Name	Botanical Name	Height	Notes
Evergreen	Native Species			
	Mulga	<i>Acacia aneura</i>	4-10 m	Hardy, versatile soil tolerance, very drought tolerant, good for screening
	Cole's Wattle	<i>Acacia coleii</i>	2-5m	Small tree, fast growing, good for screening and low shade required on western and eastern aspects
	Coonavittira Wattle	<i>Acacia jennerae</i>	2-5m	Spreading shrub or small tree, hardy and fast growing in well drained soils, suckers readily, good for screening
	Witchetty Bush	<i>Acacia kempeana</i>	2-4m	Hardy shrub, excellent for screening walls and windows on western and eastern aspects
	Cooba	<i>Acacia salicina</i>	4-12m	Fast growing, spreading habit, shallow rooted, suckers readily
	Whitewood	<i>Atalaya hemiglauca</i>	to 10m	Small shade tree, slow growing, young trees require frost protection, can tolerate rocky and clayey soils
	Desert Kurrajong	<i>Brachychiton gregorii</i>	to 10m	Great medium sized shade tree, dense canopy, prefers good drainage
	White Cypress Pine	<i>Callitris glaucophylla</i>	to 6m	Slow growing, long-lived, suitable to rocky sites, good for screening
	Ghost Gum	<i>Corymbia aparrerinija</i>	to 20m	Tall shade tree, weeping foliage, can drop large limbs- best positioned away from house or structures
	River Red Gum	<i>Eucalyptus camaldulensis</i>	20-30 m	Tall shade tree, fast growing, can drop large limbs- best positioned away from house or structures, deep rooted
	Coolabah	<i>Eucalyptus coolabah subsp. arida</i>	to 15m	Excellent large shade tree with spreading habit, versatile soil tolerance if irrigated, drought, frost and salt tolerant
	Salmon Gum	<i>Eucalyptus salmonophloia</i>	10-25 m	Large shade tree, wide spreading root system, slow growing, drought tolerant, can drop large limbs
	Thozets Box	<i>Eucalyptus thozetiana</i>	10-15m	Tall slender tree, less likely to drop limbs than many other Eucalypts, prefers sandy soils
	Little Ghost Gum	<i>Eucalyptus victrix</i>	5-6 m	Great small shade tree, better suited to smaller gardens and sites than the Ghost Gum
	Beefwood	<i>Grevillea striata</i>	to 15m	Slow growing, frost tolerant, long living
	Introduced Species			
	Citrus –Lemon, Grapefruit, Mandarin, Orange	<i>Citrus limon, Citrus paradisi, Citrus reticulata, Citrus sinensis etc</i>	2-10m	Food producing
	Olive Tree	<i>Olea europaea or similar</i>	2-10 m	Food producing, frost tolerant
	Date Palms	<i>Phoenix dactylifera or similar</i>	varies	Food producing
Climbing Species				
Jasmine	<i>Jasminum species</i>	climbing	Vine	
Passionfruit	<i>Passiflora edulis</i>	climbing	Vine	
Orange trumpet	<i>Pyrostegia venusta</i>	climbing	Vine	
Deciduous	Jacaranda	<i>Jacaranda mimosifolia</i>	to 20m	Likes well-drained soil and regular water, spreading habit, great for summer shade on northern aspects
	Chinese Elm	<i>Ulmus parviflora</i>	12-15m	Do well in most soils provided there is good drainage
	Fig Tree	<i>Ficus carica</i>		Food producing, young trees may need frost protection, like well-drained soil and consistent water
	Mulberry Tree	<i>Morus alba, Morus nigra or similar</i>	8-12m	Fast growing, food producing, like deep fertile soil and pruning, good for providing summer shade to north
	Grapes	<i>Vitis vinifera or similar</i>	climbing	Food producing, require pruning, tolerate a range of soils, good for providing summer shade and winter sun