

# FIRESCAPING YOUR GARDEN

**Firescaping** specifically refers to landscaping in ways that will reduce the probability of fire catching and spreading through the firescaped area (e.g. a garden).

In this pamphlet are some points to consider in your planning.

## THE BEST OF BOTH WORLDS

When people choose to build or buy a home in a high-hazard fire area, they should do so knowing that their entire property, including their home, is potentially fuel for a fire. The lifestyle associated with living close to nature is becoming a popular choice worldwide - so much so that the term Wildland/Urban Interface Zone has been coined. Fire is a natural part of many ecosystems, which means that it is not a case of "IF" there is a wildland fire, but "WHEN" there is a wildland fire....! However, it is possible for a home to be situated in a natural, fire-adapted environment and survive a wildfire without damage.



## THE FIREWISE APPROACH

FireWise Communities is a concept originally developed in the U.S.A. ([www.firewise.org](http://www.firewise.org)), currently being adapted and implemented in South Africa ([www.firewisesa.org.za](http://www.firewisesa.org.za)). The Firewise approach emphasizes community responsibility in designing a safe community as well as effective emergency response, and individual responsibility for safer home construction and design, landscaping, and maintenance.

By making changes in the home ignition zone - the area including and immediately surrounding the home - homeowners can substantially reduce the risk of their home becoming fuel for the inevitable fire. Examples of these changes are making sure there is adequate access to the home and an adequate water supply, and other strategies included in the FireWise approach.

### 1. Assess the Vulnerability of Your Property

- Are there plantations, thick stands of brush, shrubs and/or of invasive alien vegetation on, or close to your property? These have high fuel loads and greatly increase the intensity of fires.
- Is your property subject to strong, drying winds, such as the berg winds? Strong winds greatly affect the rate of spread of fire.
- Is your property at the top of a slope? Fire naturally moves up a slope, drying everything out ahead of it. Therefore it burns more vigorously higher up a slope than lower down.
- Is your home cut into and set back from the slope or on the slope? Structures that are set back are at less risk than those perched on a steep slope.

### 2. Create a Survivable Space

Creating "Survivable Space" means modifying your property's layout, fuels and building materials to make it less likely that your home will catch fire during a wildfire. The size of the Survivable Space is often expressed as a distance, extending outwards from the home and all attachments, such as decks and outbuildings. The distance varies, depending upon the type of natural vegetation growing near the home and the steepness of the slope. **The minimum Survivable Space should be at least 10 metres around the home**, in cases where surrounding fuel loads are light (e.g. low grasses) and the topography is flat. However, if the home sits on a 25% slope and is surrounded by woodland or dense brush, you would need to reduce hazardous fuels outwards to at least 60 metres from the structure.

#### ● Communal Survivable Space

If creating an adequate Survivable Space for your home means encroaching into your neighbours' space, then it makes sense to work together and create a joint Survivable Space. Each owner should take responsibility for their own area, but work according to a jointly agreed hazard reduction plan. This is very effective and can be achieved without losing aesthetics or privacy.

#### ● A Community Ignition Zone

A Community Ignition Zone usually includes the entire Wildland Urban Interface Zone and may include both private and public land. The work within the Community Ignition Zone is planned and implemented to create Survivable Space for the entire community, however firescaping and maintaining the Survivable Space around individual properties remains both essential and critical.

Minimum Horizontal Clearance	
SHRUBS	TREES
<p>From edge of one shrub to the edge of the next</p> <p>Flat to mild slope (0% to 20% slope) Two times (2x) the height of the shrub (Two shrubs 0,5m high should be spaced 1m apart)</p> <p>Mild to moderate slope (20% to 40% slope) Four times (4x) the height of the shrub (Two shrubs 0,5m high should be spaced 2m apart)</p> <p>Moderate to steep slope (greater than 40% slope) Six times (6x) the height of the shrub (Two shrubs 0,5m high should be spaced 3m apart)</p>	<p>From edge of one tree canopy to the edge of the next</p> <p>Flat to mild slope (0% to 20% slope)</p> <p>3 metres</p> <p>Mild to moderate slope (20% to 40% slope)</p> <p>6 metres</p> <p>Moderate to steep slope (greater than 40% slope)</p> <p>9 metres</p>

### 3. Firescaping Inside the Minimum Survivable Space

The area closest to the home is particularly important in terms of effective Survivable Space. Use a zoning system to firescape your garden within the essential 10 metre zone: plan your garden with a fire-resistant **buffer zone** on the periphery, a **medium-resistance zone** within that, and a **low-resistance zone** extending about 3 metres around the house.

Different plants and bulbs will need to be planted within the three different zones. These plants will also differ depending on the vegetation zone in which you live.

**In General, Though, Remember to be Lean, Clean and Green:**

- Within the entire area extending at least 10 metres from the home (i.e. all three zones), the vegetation should be kept lean (i.e. small amounts of flammable vegetation) and regularly maintained (i.e. plants that are kept healthy).
- Keep the area clean, don't let dead vegetation or other flammable debris accumulate. Remove dead branches and excessive leaf litter.
- Trees should be de-limbed well above the height of ground vegetation. Group shrubs and trees in small clumps or islands, with plenty of open space between clumps.
- Remove any branches overhanging the roof and any vegetation or flammable material that can act as ladder fuel (e.g. leaf litter accumulating in gutters, fine-leaved shrubs, climbers, etc.).
- Use bedding plants, succulents and bulbs. Avoid plants that are high in oils or resin. Separate islands of vegetation with well-kept green lawn, paving, gravel or other non-flammable materials.

#### Minimum Vertical Clearance

**3X HEIGHT OF SHRUB = MINIMUM VERTICAL CLEARANCE**

Example: a 1.5 metre shrub is growing near a tree.  
 $3 \times 1.5 = 4.5$  metres of clearance needed between the top of the shrub and the lowest tree branches.

3x height of shrub to lowest branches of tree.



Note: a grouping of vegetation may be treated as a single plant if the foliage of the grouping does not exceed 3 metres in width. For example, three individual shrubs growing in a cluster with a total foliage width of 2.5 metres can be "grouped" and considered as one plant.

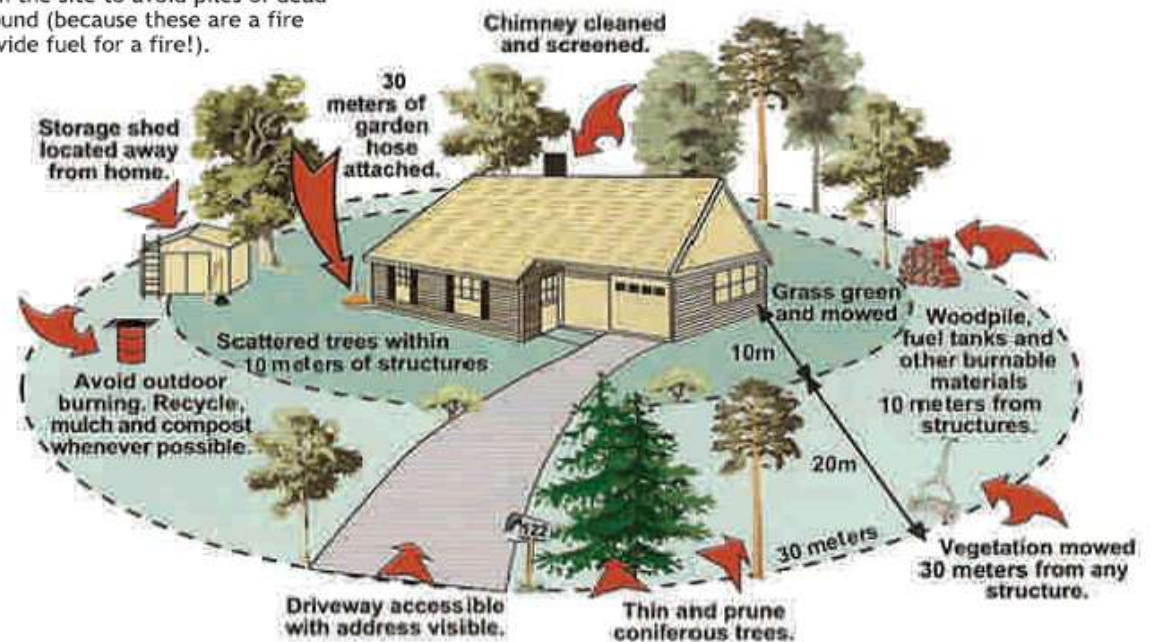
### 4. Reduce Fuel in the Entire Survivable Space

Beyond the essential 10 metre zone, uncleared ground fuels (such as excessive vegetation) can provide an open route for the rapid spread and increased intensity of fire.

- Remove all dead branches and lower limbs of shrubs and trees. Thin out vegetation, so that there is not a continuous fuel bed for the fire to move forwards through.
- Group shrubs and trees in small clumps or islands. Space out the clumps so that the spreads are 1.5 - 3 metres apart in flat areas, and crowns are up to 10 metres apart for big trees on a steep slope.
- Prevent fire moving from the ground into the trees by pruning lower branches and leaving a generous space between the ground vegetation and the tree. Try to anticipate the flame height when calculating the pruning height.
- Avoid or remove tree species that have high levels of resin or oils. Plant trees and shrubs that are fire-resistant or fire-adapted.

### 5. Clear Invading Aliens On and Near Your Property

Cut down or herbicide invasive alien trees and shrubs, and remove them from the site to avoid piles of dead material lying around (because these are a fire hazard - they provide fuel for a fire!).



### 6. Remember: There is No Such Thing as a Fire Resistant Plant

All plants will eventually burn if a fire is hot enough. However, one thing that can be done is to place plants according to how long each kind is able to resist burning. Large fleshy succulents, such as Aloes, that are planted close to homes have been shown to have a fire retardant effect, absorbing radiant heat from an approaching fire.

### 7. Re-Vegetating a Burnt Area

Fire-adapted landscapes generally recover quickly after a fire, especially if there are bulbs and re-sprouters in the Firescaped mix. Pioneer plants that will grow quickly after fire are *Agapanthus*, *Psoralea pinnata*, *Euryops*, *Athanasia dentata*, *Gazania*, *Felicia*, vygies (*Lampranthus*, *Malephora*, *Drosanthemum*, *Delosperma* and *Carpobrotus*) and *Virgilia oroboides*.