

Reducing the vulnerability of housing

- Ensure accessibility.
- Avoid accumulation of dry leave on the ground.
- Ensure the gutters down-pipes fare clean and free from obstructions.
- Store firewood as far as possible away from the house.
- Avoid grasses, branches and dry leaves around the house.
- Keep a clean space between the house and any combustible elements.
- Cut down all trees and branches situated in the immediate 7-10m around the house.
- Keep branches away from chimneys.
- Gas and gas-oil containers should be kept away from the house. The area around the containers should be kept clear of vegetation.
- Provide your home with a secure water supply.
- Use windows with air space between glazing units.
- Use fireproof blinds. Avoid wood windows.

Defence equipment

With the passage of a forest fire, electric supply can be affected:

- Provide yourself with torches/flashlights.
- Use water fuel oil bombs to guarantee water pressure.
- Ensure that the garden hose is long enough to reach all parts of your property.
- Implement the action recommended by the Housing Development Self-protection Plan.



More suggestions to get a more fire resistant garden

- **Select non-flammable plants for your garden.**
- **Avoid heather and cypress fences - these have a high fire propagation capacity.**
- **The distribution and the structure of vegetation must allow accessibility and movement of people.**
- **Remove dead fuel of the garden.**
- **If you have fire hydrants, make sure they are operatives**

<http://fireparadox.org/>

emergències
112

FIRE PARADOX



Generalitat de Catalunya
Departament d'Interior,
Relacions Institucionals i Participació

bombers

Avinguda de la Universitat Autònoma, s/n
08290 Cerdanyola del Vallès

■ ■ ■ ■ ■ ■ ■ ■ ■ ■ bombers ■ ■ ■ ■

Self-protection fire
management guide

**PREPARING
THE PROPERTY**

VEGETATION MANAGEMENT



Managing vegetation

In order for the inside of a house to burn, the occupied building needs to be exposed to intense heat or have openings that enable the fire to enter the building. A pre-determined spatial vegetation distribution pattern around your home (ornamental vegetation, etc.) is essential to make a dwelling less vulnerable to forest fires. The nearest vegetation to your home will be responsible for fire entry.

Your home must be surrounded by two managed vegetation areas: the immediate ring and the outside ring. The size and shape of the exterior and immediate rings depend on fire pattern (the environmental technician in your area can specify these parameters).

In general terms, the diameter of the protection area around a home must be four times the vegetation height. The protection perimeter in areas with marked winds must be elliptical, as you can see in the image on the other page of this leaflet.

Vegetation management for each ring

Immediate ring

- Keep this area free of trees.
- Cut the grass and consider using crushed stones or gravel as a ground cover.
- Remove all flammable vegetation, such as branches and dry leaves.
- Select small, non-flammable species and plant them separate from each other.
- Avoid climbing plants on the walls.

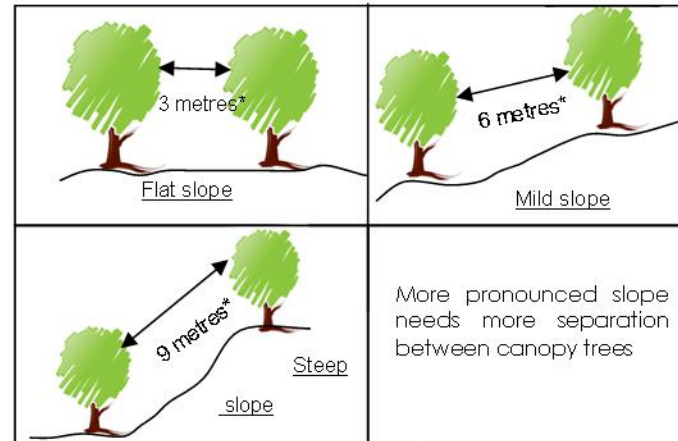
Outside ring

- Keep a recommended space between trees, and avoid overlapping tree crown canopies.
- Prune trees, leaving fuel-free lines under tree crown canopies.
- Individual shrubs should be separated by 3m.

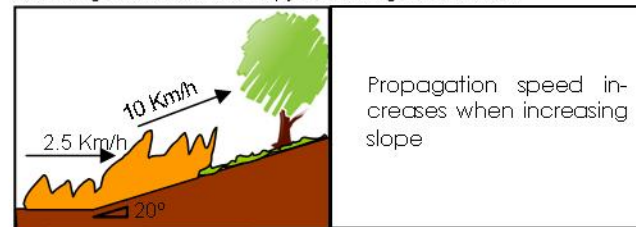
Reducing and controlling vegetation

The location of your property will determine what kind of vegetation (and treatment) will be most suitable. Fire behaviour changes depend on:

Slope

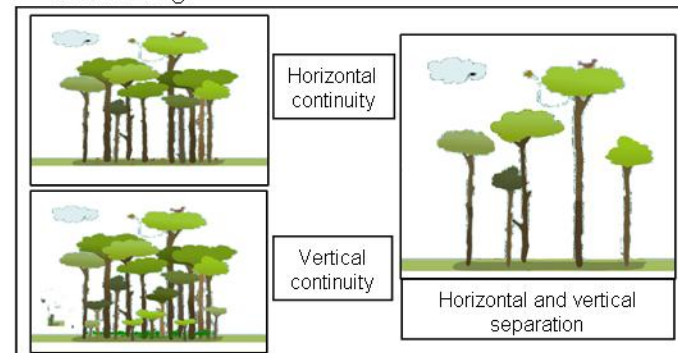


*From edge of one tree canopy to the edge of the next



Fuel continuity

- The vegetation in the green and/or fuel-free zone must have a low profile and should not restrict the movement of people.
- Tree crown canopies must be separated in the exterior ring.



Gardening

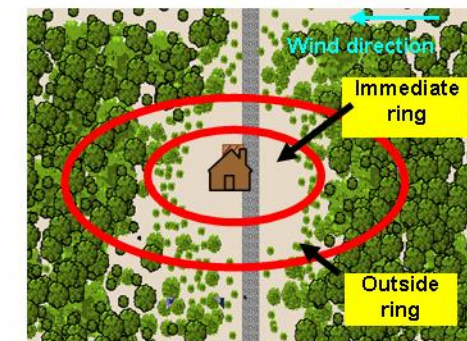
- Avoid fences of vegetation, which are elements that allow spread of fire between plots.
- Avoid highly flammable plants as Pines, Holm Oaks, Palm trees, Cypress or Heather fences.



Cypress fence in flames. Cypress is one of the most inflammable species which must be avoided in the gardens.



Low volume of fuel loads



The diameter of the area around the home must be four times the vegetation height.

$$\varnothing = 4 \times v_h$$

v_h : vegetation height

The protection perimeter in areas with marked winds must be elliptical

Housing development areas situated in a forestry environment

Housing development areas must have a managed environment in order to protect them against forest fires. Vegetation in abandoned and non-urbanized plots can provide exposure or can be the origin of uncontrolled forest fire spread, causing significant losses. For these reasons, vegetation within the housing development areas must be also managed.

Managing and maintenance of these areas can be carried out with prescribed burnings, forestry management or shepherding. Any of these actions involves an adaptation by the population (of smoke fires, work machines, smell of livestock) and changes on the landscape.