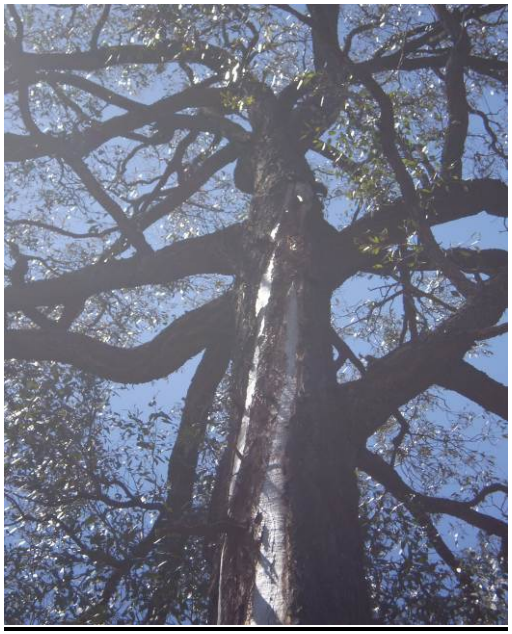
Disease Profile

Common name	Lightning strike	**Pest/disease type**	Abiotic disease
Host	Any tree, larger tree more likely to be struck		
Symptoms	Dehydration, mechanical damage		
Additional information	Lightning strikes may kill a tree almost instantly. Direct hits from lightning can blow sections of the tree apart. Hot strikes (above 14,000°C) can cause a tree to burst into flames. Cold strikes (more common) travel at 32,000km/s. Often when conifers are struck the portion above the strike dies; when palms are hit they rarely survive. In some cases a continuous strip off bark and wood may be blown off a branch and the stem, leaving a groove that follows the grain all the way to the ground. Internal trunk tissues may or may not be damaged. Perhaps the most critical issue is the exit point of the electricity. If the strike arks out to another surface e.g. house, than the likelihood of survival is increased. When the electricity travels down to the roots and exits into the soil is when most damage occurs and the tree is unlikely to survive. The tiny absorbing components of the root system are literally blown off. This results in dehydration occurring normally within a few days-few weeks. The severity of the injury correlates to the amount of water present on and in the tree and the anatomy of the tree. The taller the tree, the more likely it is to be impacted by lightning. *Washingtonia robusta* seem to be struck fairly often in Sydney. Secondary infections are common with trees that have been struck.		
Control options			
Artificial control	Lightning protection systems can be installed in trees. Lightning rods with copper cables leading to the ground into the soil and attached to grounding rods may offer protection for highly valued trees.		
Remedies	Lose bark can tacked back in place and kept moist, irrigation is essential, molasses may be applied to stimulate soil microbes which may aid in mineral and water uptake. Pruning should be kept to removing damaged portions of the tree. Further pruning can be done in 6-12 months if the tree survives.		



References:

Costello, Edward, Matheny, and Henry, 2003, Abiotic disorders of landscape plants, a diagnostic guide.

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