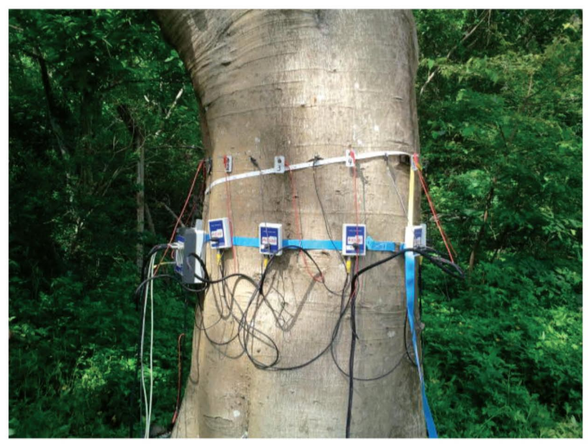
都市樹藝有限公司
Muni Arborist Limited

Advanced Decay Detection Equipment - Tomograph

The PiCUS® Sonic Tomograph is a non-invasively instrument to detect decay and cavities in trees. The velocity of sound waves in wood depends on the modulus of elasticity and the density of the wood itself. The PiCUS unit tracks the speed of these waves. Most damage and disease causes fractures, cavities,or rot and reduces the wood's elasticity and density. Depending on the size of the tree, the PiCUS Sonic Tomograph consists of 5 to 20 sonic sensors. These sensors are spaced out evenly around the circumference of the trunk to detect stress waves induced by manual impact. Sound waves cannot take a direct path through the wood if there is a cavity between the transmitter and receiver and the sound valves travels slower in decayed wood. The velocity of sound in wood recorded by the sensors will be transmitted to a software and visualised in a color picture after calculation.



Shortcoming of Tomograph

Cracks in the wood may be mis-interpreted by the software as a large decay.
It is also impossible to interpret if the decay is active.

Treetronic

The PiCUS Treetronic uses electric current/voltage to examine the tree. The device measures the electrical impedance of the wood and displayed in an Electrical Impedance Tomogram (EIT). The electric impedance of the wood is influenced most of all by the water content, cell structure and chemical elements which change according to the status of wood. Decaying wood has a higher moisture content and thus a lower electrical impedance.
When used in combination with a Sonic Tomograph, an EI tomogram offers you more information about the tree. The EIT helps to analyse the type of damage, and it is often possible to distinguish between cavities and 'wet' diseased wood.



