

Identification

The Science behind Arboriculture

A bit like CSI, sometimes identifying tree species can be a tricky business. Some trees have really subtle differences and depending on the season, you may not always be able to identify the exact specie without calling on a higher power....science! Here at Tree Logic we have a range of technical diagnostic instruments and resources to undertake many of the basic testing that is needed at part of or typical consulting works. These include pH and EC meters, Munsell Soil Chart Kits and Plant Tissue Index charts and various sampling devices. Occasionally Tree Logic consultants come across plant problems that require additional diagnostic services. There are a range of industry bodies and private companies who have specialised diagnostic services for such tricky plants. By working in collaboration with scientists we find the solutions to particular problems.

Species Identification

If we find a specimen that is so rare or unusual that the individual consultant and the team back at Tree Logic cannot identify it either at Genus or Species level even after referring to a wide range of technical books and computer programs, such as our featured tree we might send our sample to the National Herbarium for identification.

Plant Identification Service
National Herbarium of Victoria
Royal Botanic Gardens
Birdwood Avenue
South Yarra, VIC, 3141
Phone: (03) 9252 2315

Pest & Disease Identification

Occasionally our technicians will find a pest or a disease of a tree that is difficult to identify or unable to be seen when suspected. For example, fungal diseases such as Fusarium Wilt, Amillaria and Phytophthora can be difficult to identify in many situations and often the best practice is to send a sample of plant, root and soil off for expert analysis.

Unusual pests or pest that are difficult to see with the naked eye can also be sent or taken for a fee, to service diagnostic laboratories.

Institute for Horticultural Development

Crop Health Services
Private Bag 15
Scoresby Business Centre, VIC, 3176
Phone: (03) 9210 9356
Fax: (03) 9887 3166

Or take it to:

Crop Health Services

621 Burwood Highway
Knoxfield, VIC, 3180
between 8.30am - 4.30pm (Monday to Friday)

Forest Pathology Laboratory

Forest Science Centre Department of Sustainability and Environment
123 Brown Street, Heidelberg
Ph: 9450 8666, Fax: 9450 8644
Postal address: PO Box 137, Heidelberg, Victoria 3084

Leaf & Tissue Analysis

Tree Logic sometimes has the need to understand the nutrient status of a plant so that we can best detect a deficiency or recommend fertilizing to treat a particular nutrient issue. Prior to any recommendations for treatment Tree Logic will often obtain a plant leaf or tissue analysis so that levels of macro and micro nutrients are understood and any deficiencies can be confirmed.

Incitec Pivot Limited
8 South Road,
Werribee, VIC 3030
Toll-free: 1800 803 453
Fax: (03) 9974 0699
Email: .feedback@incitecpivot.com.au lab.feedback@incitecpivot.com.au

Tips for Preparing Your Samples

Samples need to be properly bagged and labelled. It is best to telephone the organisation prior to sending off samples to learn the correct process.

Tree Logic Services

Tree Logic also has a range of technical equipment that we use to diagnose certain tree and plant issues. We can now offer these services on a casual basis when additional information is required in particular situations.

1. Sibert DMP™ Decay Detection Drill:

This decay detection works in the same manner as a Resistograph but with the added stability of a continuous pressure reading to add a further degree of accuracy to the readings. This resistance to penetration is recorded digitally and the information provided indicates the presence and extent of wood decay as well as dendrological information. The information can be displayed graphically to aid in understanding of the findings.

Tree Logic can undertake Sibert DMP™ Decay Detection works as part of a stand-alone inspection or combine it with an aerial canopy inspection.

2. Chlorophyll Fluorescence Measuring:

Chlorophyll fluorescence can be used to investigate the health status of leaf samples of the plant. Chlorophyll fluorescence works on the principle that photosynthesis is one of the core functions in the physiology of plants. The functional state of photosynthesis has been considered an ideal physiological activity to monitor the health and vitality of plants. Tree Logic uses a HandyPEA portable fluorescence spectrometer to obtain fluorescence values from the sample leaves and then comparing these to a health sample to compare and assess the health status.

Tree Logic can undertake these works including sampling, testing and interpretation of fluorescence values and plant health.