

A VISUAL TREE ASSESSMENT

MADE BY INVESTIGATING THE FOLLOWING:

- **CROWN DENSITY:** *Broadleaved trees and needle bearing trees during the growing season should have canopy density of at least 80%. This is determined by standing underneath the tree and looking through the canopy. The denser the canopy, the healthier the tree. Crown density can be influenced by biotic and a-biotic factors (see later).*
- **LEAF COLOUR:** *Any chlorosis (loss of chlorophyll) is an indication of tree health i.e. the lighter the leaf, the more likelihood of a problem. Leaf analysis will provide information on nutrient availability*
- **DEAD WOOD:** *This is sorted in size and quantity. Large dead branches create a path of infection and take longer to heal. The more dead wood. The more likelihood of problems.*
- **STAGHORNS:** *These are branches protruding from the top and side of crowns in trees, resembling stag horns. This is usually associated with serious root loss or damage to root zone causing loss of sap flow.*
- **BIOTIC AND ABIOTIC FACTORS:** *Biotic factors include pathogens causing diseases, i.e. insects, bacteria or fungi. A-biotic factors include physical damage, i.e. construction damage, poisoning, etc.*
- **TREE STABILITY:** *Hazard rating is done to determine tree stability. This is applicable to main stems and secondary branches (big and small). Here unbalanced growth due to abnormal growing conditions, is also considered*
- **VIGOUR AND CONDITION:** *Healthy growth is a sign of good vigor. This healthy growth might be set on old wounds that are fragile or suffering from wood rot, therefore trees with good vigor are not necessarily in good condition*
- **SOIL CONDITION:** *Tests can provide further information on compaction, water, oxygen/air and nutrient availability in soils.*

- *WOUNDS: Physical damage, i.e. storm damage should be repaired as soon as possible, to prevent wood rot, tree decline, and tree failure. Wounds allow a path of infection. Good Arboriculture practices can enhance the tree's mechanism to prevent tree failure and promote compartmentalisation.*
- *TYPICAL SHAPE: All tree species strive for their individual species' typical shape. Crown competition (see below) and site conditions cause the loss of shape/form.*
- *STRUCTURAL DEVELOPMENT: Attention should be given to narrow V-shaped, co-dominant forks that will lead to included bark, and tree failure. The selection of permanent branches when pruning juvenile trees will ensure structural sound trees.*
- *CROWN AND ROOT COMPETITION: In an overpopulated forest or avenue, roots and crowns compete with each other. The result is usually the forming of recessive trees or portions of trees. The loss of trees or portions of trees is usually unavoidable in time. Remaining trees will have disturbed forms, which will lead to structural instability, and storm damage.*
- *BARK DEVELOPMENT: Healthy trees develop new bark regularly causing old bark to be shed. In the event of tree decline or trees under stress, bark could appear either thin and/or light of colour.*