

# IRRIGATION GUIDELINES

## FOR THE ESTABLISHMENT OF ORNAMENTAL TREES AND SHRUBS IN THE SYDNEY BASIN AND SURROUNDING ENVIRONS.

- Research clearly shows that recently planted trees and shrubs establish efficiently with light, frequent irrigation. When transplanted trees and shrubs are establishing their root mass into the native soils, a larger volume of water application does not compensate for infrequency (Gilman 1998)
- When planting nursery grown trees & shrubs, failure to provide water to the plants entire root ball results in significant root die back, which in turn results in either the plants gradual decline to death or a condition known as, "failure to thrive".
- Growing media used in container grown stock drains freely and has a lower water holding capacity than that of natural soils. New plantings lose water from both the species consumption and surrounding soil absorption. These conditions render drip irrigation, an inappropriate water delivery method. When planting semi advanced or advanced stock (common practice in urban horticulture) or seedlings for annual displays, reliance on drip systems for establishment often results in failure, additional costs and disappointed clients. It is vital that the entire root ball is moistened rather than isolated moist areas associated with drip emitters. The exception to this rule is for tube stock and small container sized plants.
- Drip irrigation is best suited for soils with low infiltration rates such as clay/loam soils. The use of drip irrigation on shallow sandy soils is grossly inefficient as a larger quantity of water drains away before the soils moisture levels are consistent. This results in masses of roots accumulating around each drip emitter.
- Roots never grow towards dry soil
- Trees and Shrubs planted in spring and summer require twice the amount of water to establish than those planted in autumn. This factor must be considered when calculating the establishment period water requirements
- Regular irrigation after planting encourages rapid root growth that is essential for establishment. Irrigation helps maintain and encourage the desirable dominant leader in the tree canopy on large-maturing trees. Instead of a dominant leader, trees that are under irrigated during the establishment period often develop undesirable, low, codominant stems and double leaders that can split from the tree in years to come.
- Qualified and practicing Horticulturists have the knowledge and skill to analyse the site for correct species selection, prepare the surrounding soils correctly, plant the species properly and accurately determine weekly water requirements for each species within the landscape asset. When works are performed to best practice, application of water via irrigation would only be needed during periods of extended drought.