

**APPENDIX 12 - Proper Planting Practice - Keep Sufficient Space Clear of
Vegetation at the Base of Trees**

Proper Planting Practice

Keep Sufficient Space Clear of Vegetation at the Base of Trees

- 1. In the design, installation and maintenance of vegetation cover, try to keep the area around the base of tree trunk clear of vegetation or excessive soil/mulch fill (i.e. fill above the level of tree root collar) where practicable, to avoid adverse impact on tree growth and hindrance to tree inspection.**

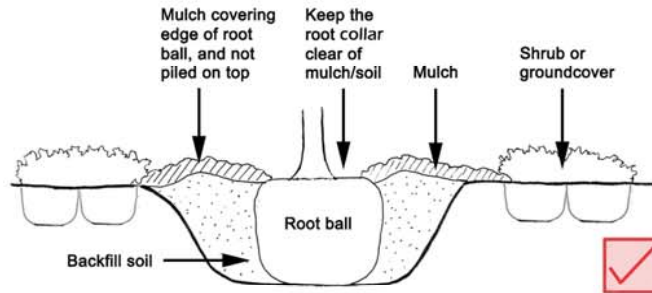


Figure 1 Keep the root collar clear of mulch/soil/other plants.



Photo 1 Keep sufficient space at the base of trees clear of dense vegetation. Apply mulching beyond root collar, and where space allows, extensive application of mulching at root zone is recommended in particular for large trees.



Photo 2 Dense vegetation obstructs thorough tree inspection at the lower trunk and root zone.



Photo 3 Constant replacement of annuals disturb tree roots.

- 2. How far should the area around the base of tree trunk be cleared of vegetation or excessive soil/mulch fill?**

- The edge of the clearance zone is recommended to be around 150 mm – 300 mm from the tree trunk, depending on the size of the tree and its root flare as well as the actual site condition.
- There may be cases where clearance of vegetation around the base of tree trunk is not appropriate, such as on slopes where vegetation clearance will lead to soil erosion and may disturb the natural succession process of slope vegetation cover. Selective cutting back of undergrowth to facilitate tree inspection may be necessary in this situation.
- Professional judgment is essential in deciding the actual size of the clearance zone and how clearance should be carried out.

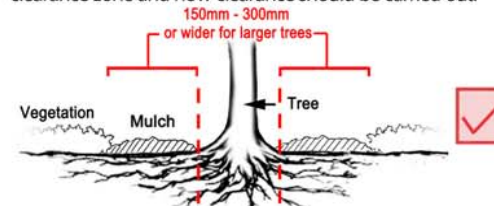


Figure 2 Keep a 'Vegetation-clear' zone at the base of tree.

- 3. Disadvantages of having vegetation or excessive soil/mulch fill at the area around of the base of tree trunk –**

- Adverse impact on tree growth
 - Undergrowth (shrubs/ground covers/grass) will compete with trees in the uptake of soil water and nutrient.
 - Undergrowth that requires frequent replacement (such as seasonal flowering plants and annuals) will result in constant disturbance and damage to tree roots.
 - Undergrowth may require more frequent watering (such as ground covers and grass), which together with the dense vegetation cover creates moist environment that promotes fungal diseases at the base of tree trunk.
 - Excessive soil/mulch fill will reduce oxygen supply to tree roots, resulting in suffocation and decay of tree roots.
- Hindrance to tree inspection
 - Dense undergrowth or excessive soil/mulch fill will obscure the base of tree trunk, making any defects at this part of the tree not readily discernible during tree inspection.

References:

Harris, R.W., Clark, J.R., & Matheny, N.P., *Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines*, 4th edition, Prentice Hall, Upper Saddle River, NJ, 2004

Watson, Gary W. and Himelick E.B., *Best Management Practices - Tree Planting*, International Society of Arboriculture, U.S., 2005.

Watson, Gary W. and Himelick E.B., *Principles and Practices of Planting Trees and Shrubs*, International Society of Arboriculture, U.S., 1997.



Photo 4 Annuals or shrubs planted under trees compete with trees for space, air, water and nutrients.



Photo 5 Soil piling above the root collar would lead to suffocation of roots and decay at the lower trunk/ root collar.



Photo 6 Moist environment created by dense ground vegetation promotes fungal growth around trunk base / root collar.