Northumberland County Council

Tree planting

Think of the tree you just purchased as a lifetime investment. How well your tree, and investment, grows depends on the type of tree and location you select for planting, the care you provide when the tree is planted, and follow-up care the tree receives after planting.

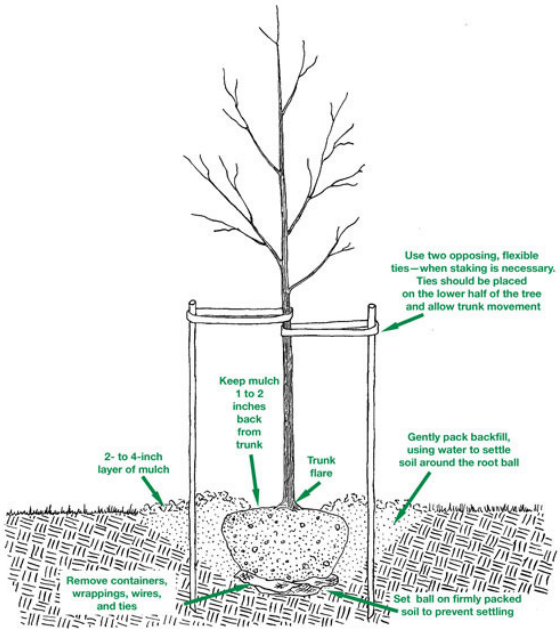
Planting the Tree

The ideal time to plant trees and shrubs is during the dormant season, which is after the leaves have fallen in the autumn and before the buds open in the spring. Weather conditions are cool and allow plants to establish roots in the new location before spring rains and summer heat stimulate new top growth. However, trees properly cared for in the nursery or garden centre, and given the appropriate care during transport to prevent damage, can be planted throughout the growing season. If you are to plant a tree at this time of year it is important to ensure that you adequately water the tree before and after planting and throughout the summer, ensuring the soil is kept damp but not soaked. Before you begin planting your tree, be sure you have had all underground utilities located prior to digging.

If the tree you are planting is balled or bare root, it is important to understand that its root system has been reduced by 90 to 95 percent of its original size during transplanting. As a result of the trauma caused by the digging process, trees commonly exhibit what is known as transplant shock. Containerised trees may also experience transplant shock, particularly if they have circling roots that must be cut. Transplant shock is indicated by slow growth and reduced vigour following transplanting. Proper site preparation before and during planting coupled with good follow-up care reduces the amount of time the plant experiences transplant shock and allows the tree to quickly establish in its new location.

Carefully follow nine simple steps, and you can significantly reduce the stress placed on the plant at the time of planting.

1. **Dig a shallow, broad planting hole.** Make the hole wide, as much as twice the diameter of the root ball but only as deep as the root ball. It is important to make the hole wide because the roots on the newly establishing tree must push through surrounding soil in order to establish, which helps to stabilise the growing tree. On most planting sites in new developments, the existing soils have been compacted and are unsuitable for healthy root growth. Breaking up the soil in a large area around the tree provides the newly emerging roots room to expand into loose soil to hasten establishment.



2. **Identify the trunk flare.** The trunk flare is where the roots spread at the base of the tree. This point should be partially visible after the tree has been planted. If the trunk flare is not partially visible, you may have to remove some soil from the top of the root ball. Find it so you can determine how deep the hole needs to be for proper planting.
3. **Remove tree container for containerized trees.** Carefully cutting down the sides of the container may make this easier. Inspect the root ball for circling roots and cut or remove them. Expose the trunk flare, if necessary.
4. **Place the tree at the proper height.** Before placing the tree in the hole, check to see that the hole has been dug to the proper depth. The majority of the roots on the newly planted tree will develop in the top 30cm of soil. If the tree is planted too deeply, new roots will have

difficulty developing because of a lack of oxygen. It is better to plant the tree a little high, 5-8cm above the base of the trunk flare, than to plant it at or below the original growing level. This planting level will allow for some settling. To avoid damage when setting the tree in the hole, always lift the tree by the root ball and never by the trunk.

5. **Straighten the tree in the hole.** Before you begin backfilling, have someone view the tree from several directions to confirm that the tree is straight. Once you begin backfilling, it is difficult to reposition the tree.
6. **Fill the hole gently but firmly.** Fill the hole about one-third full and gently but firmly pack the soil around the base of the root ball. Then, if the root ball is wrapped, cut and remove any fabric, plastic, string, and wire from around the trunk and root ball to allow growth. Care should be taken not to damage the base of the tree at this point. Fill the remainder of the hole and gently firm with your heel to eliminate air pockets that may cause roots to dry out. To avoid this problem, add the soil a little at a time and settle with water. Continue this process until the hole is filled and the tree is firmly planted. It is not recommended to apply fertilizer at the time of planting.
7. **Stake the tree, if necessary.** If the tree is grown and dug properly at the nursery, staking for support will not be necessary in most home landscape situations. However, protective staking may be required on sites where lawn mower damage, vandalism, or windy conditions are concerns. If staking is necessary for support, there are three methods to choose among: staking, guying, and ball stabilizing.

- One of the most common methods is staking. There are several ways to stake a tree. One method is to knock two stakes, one on each side of the tree, into the ground and then attach with a wide, flexible tie material on the lower half of the tree. This will hold the tree upright, provide flexibility, and minimize injury to the trunk. A tree should ideally be staked for only one year.

- Guying tends to be used with larger trees. In this method, metal guy wires are used to hold the tree in place (see diagram)
- Ball stabilizing is achieved by knocking two long wooden dowels into the ground ensuring they pass through opposite sides of the tree root ball. This method allows the entire tree stem to flex which can result in better stem taper and faster establishment.

8. **Mulch the base of the tree.** Mulch is simply organic matter applied to the area at the base of the tree. It acts as a blanket to hold moisture, it moderates soil temperature extremes, and it reduces competition from grass and weeds. Some good choices are leaf litter, shredded bark, peat moss, or composted wood chips. A 5-10cm layer is ideal. More than 10cm may result in reduced gas exchange and less water being absorbed into the soil. When placing mulch, be sure that the actual trunk of the tree is not covered. Doing so may cause decay of the living bark at the base of the tree. A mulch-free area, upto 5cm wide at the base of the tree, is sufficient to avoid moist bark conditions and prevent decay.
9. **Provide follow-up care.** Keep the soil moist but not soaked; overwatering causes leaves to turn yellow or fall off. Water trees at least once a week, and more frequently during hot weather. When the soil is dry below the surface of the mulch, it is time to water. Continue until mid autumn when with cooling temperatures, less watering is required.

   Other follow-up care may include minor pruning of branches damaged during the planting process. Other corrective pruning can be carried out in the second and third year after planting.