

Planting Under Established Trees

The logo for Turf, featuring the word "Turf" in a bold, black, sans-serif font. A green grass blade is integrated into the letter 'T'.The logo for Tree Services, featuring the words "Tree Services" in a bold, black, sans-serif font. A small green leaf is above the 'i' in "Services". Below the main text is the tagline "Taking Tree Care to New Heights" in a smaller, italicized font.The logo for DesignBuild, featuring the word "Design" in a black, sans-serif font and "Build" in an orange, sans-serif font. A small orange square is above the 'i' in "Design".The logo for PLOW, featuring the word "PLOW" in a bold, blue, sans-serif font.

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In landscapes of all ages and maturities—even landscapes that are only four or five years old—there's a need for adding color, texture, mass or something interesting other than mulch under established trees. In a shady landscape, the turf underneath the trees is likely to be struggling, and the customer wants something other than bare dirt and thin, mildew-infested grass. Sure, customers want big trees, but sometimes trees alone aren't quite enough. One of the most common scenarios is when the previous property owner has limbed up a shade tree to suit their purposes, and the new owner is unhappy with the big empty space.

As a landscaper, can you help them out? Sure. At first glance, it's a slam dunk. Paint out some planting bed lines, dig some holes, insert lots of large shrubs and shade loving perennials and mulch it in. However, as with many other endeavors, it's not as simple or easy as it looks.

Entering the PRZ



Standing in the way of a quick fix is the Protected Root Zone (PRZ). Large trees develop extensive roots, which flatten out in a shallow pancake style arrangement. These can extend for a long way from the trunk.

Unfortunately, digging holes to introduce other ornamentals will cause extensive damage to the roots of existing trees. Even though the periphery of the root system is responsible for the most nutrient and moisture uptake, many roots under the tree canopy are remarkably absorptive. Drawing on past experiences, think about the care you take to avoid heavy doses of broadleaf herbicide application to lawns under trees; the last thing you want to do for a customer is damage or kill the tree in the process of killing a few weeds.

Not only is the severing of established tree roots problematic, another common root system insult is the addition of soil, plants and wood/stone to

hold it in place, sometimes referred to as a “tree surround.” Tree roots need oxygen; when a significant amount of soil is placed over the existing soil surface, the capacity for the tree to extract the necessary amount from the atmosphere is greatly reduced, causing a slow, but steady decline in the health and vigor of the tree. Even though it’s a good way to create a fast solution, it’s not a good procedure for the long term health of the tree.



Emerald Gaity Euonymous
under Hawthorn.

The key issues are the consideration of the soil, roots and living organisms underground—the rhizosphere—and how to avoid root disturbance. Digging into it and placing soil over it are operations to be avoided. Yet, the problem remains. Can the customer have his cake and eat it, too? The answer is “yes,” but with caution on the part of the landscaper. How do you do it? There are several ways. First, consider the timing of the root disturbance in terms of the age of the existing tree.

In reality, minimal damage from planting occurs when trees are young, in the first or second year of establishment, before tree roots spread too far. After all, in many situations when trees fail to establish in a landscape, the cause is related in some way to a lack of root expansion. It could be due to compacted clay soil that limits growth or decay of the root hairs. In any event, if the lateral root growth is delayed, or occurs slowly, there are likely to be sections of the landscape planting area that aren’t thick with tree roots.

When shouldn’t you? Simple: later in life than two years or two seasons of growth. After this point, look for other options.

What to do instead

1. Nothing.



Let mulch fall from trees to
create a natural mulch.

Let the tree debris create a natural mulch under the tree that cools, suppresses weeds and protects the tree trunk from the errant mowing operations. Actually, it’s not nothing; it’s a re-creation of Mother Nature forest duff. Teach the customer that this is a good thing. On a recent trip to the New Hampshire woods, I was reminded of the importance of the decomposing leaves and stems in providing nutrients for the trees. Pushing back the upper layers of forest debris, the earthy aroma of decaying tree droppings reminded me that the 3 to 5 inches of “stuff” that had fallen was busy at work.

It's a laudable goal to not only teach customers the value of the duff, but to install it in their landscapes. Doing so is probably the best service you can provide. A naturalized condition such as this cools the soil in summer, suppresses weed growth and, as mentioned earlier, recycles nutrients to the tree.

2. Dig small holes and "shoehorn" in some shady groundcovers.

Shoehorning requires patience on the behalf of the customer, as small plants take several years to cover the ground under trees. However, in just a few years, the ground plane under a tree can be covered with an attractive plant material, offering color and texture to an otherwise empty space.

Be sure to choose and install plants that are completely winter hardy in your area. Doing so makes it easier to convince customers of your virtues and credibility as a landscaper with respect to future jobs or word-of-mouth comments to their friends, relatives and co-workers.



White pine trees in process of creating forest duff, or at least an urban version thereof.

3. Choose the right plant.

Pick plants that spread and plants that have large leaves and/or long stems from a central crown. These choices will cover the mulched surface with leaves, while killing a minimum of tree roots during the planting process. Large leafed hosta cultivars and bergenia are good examples.

4. Start over.

This is only a good idea in previously unplanted areas, or if the tree is dying and needs to be removed anyway. Yet, just the thought of it further emphasizes the proper level of secondary root damage when planting: none. In new plantings, the root systems of trees, shrubs, groundcovers and perennials are separated by several feet of soil. It's only when the notion of planting under established trees arises that the potential for damage occurs.

The bottom line is that planting under established trees can be both a profit center and a problem. As outlined above, in most scenarios, it will cause significant damage to the shallow and very important roots. As an ethical and respectable landscaper, your challenge is to discern when to plant, when to let mulch predominate and when to choose an alternative plan.