

# When bad things happen to good trees

*For urban landscape trees, it's just a matter of time before they are in the wrong place at the wrong time. Avoid many problems before they happen*

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**T**he urban landscape is no place for a tree. We plant them because of the benefits they add to the landscape, but for trees, it's often just a matter of time before they're in the wrong place at the wrong time.

Trees are meant to grow in groups where roots are shaded, soil compaction is minimal, nutrients are recycled and, should the trees fall, they damage only other trees. In the man-made landscape, very bad things happen from the start. A tree just dug from the nursery can undergo rough handling, planting delays, a dry root ball and more; all of which stress it considerably. And that's before it's even planted!

## Urban jungle

By the time the tree is actually placed in the planting hole, it is already in shock. Then there's the planting hole.

Topsoil? More likely, we see compacted subsoils and, if not, a limited rooting area. Tree wells in the pavement do not offer anything to a tree. And, in most communities, tree roots and the sidewalk are considered to wage a constant battle in the tree lawns. Root pruning is common, and if there is any street construction, virtually no

one tries to limit the damage to the tree roots. Vehicles, lawnmowers and other mechanical damage to the tree trunk take their toll.

Add more insults — tree supports that are never removed or removed too late, poor pruning practices, drought, insects or disease — and you have a comprehensive list of the most common mistreatments affecting the average urban tree.

## If you can't take the heat

Trees are pretty tough, but they cannot withstand one stress after another without some negative results. Each of these things on its own would have an effect on a tree,



**Trees along roads and streets can suffer from compacted soil and lack of oxygen to roots, poor water movement through the soil, vehicle exhaust, winter road salt and the possibility of damage or vandalism.**

and a reasonably healthy tree could withstand many of them. But when many insults occur repeatedly, it can be too much. Limiting some of these practices can go a long way in helping a tree survive and adding value to your site for a long time. Consider these pointers to help survival:



**Conks at the base of a tree are a sign of internal decay. Don't ignore these signs.**

## 1. Reduce potential for injury

Repeated injury to surface roots or to the base of a tree opens it to decay organisms, some of which are pretty serious (not just for the tree). Decay that affects the tree roots and/or the base of the tree is serious from a hazard point of view. It affects the structural stability of the tree and increases the possibility for failure. Trees with decay at the base and cavities in the trunk should be inspected by a professional arborist with experience in assessing hazard trees.

Pruning tree roots can affect the stability, as well as reduce the rooting area of a tree, making it tough to get enough water and nutritional elements from the soil. All tree species are not affected to the same extent and some are more sensitive than others, but stability problems below ground and decline above ground are a distinct possibility.

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▲ Surface roots are prone to damage, which opens the stabilizing roots to decay.

▶ Fill added to a sloped site can bury the tree roots to a considerable depth. Virtually no tree can survive this treatment.

## An arborist's waking nightmare

- ▶ Observing annuals planted under a tree whose roots have been freshly rototilled.
- ▶ Coming too close to large, bad-tempered dogs chained to trees, nerve-racking for the arborist and damaging to the trees.
- ▶ Finding a tree girdled by a clothes-line tied around the trunk.
- ▶ Noticing a piece of wood used to "push" a tree away from a fence.
- ▶ Seeing a large growing tree pruned to keep it small, "butchered" by the untrained.
- ▶ Watching a person bang a lawn mower into a tree.
- ▶ Telling people about the potential hazard and/or need to remove a tree with large dead branches or an enormous cavity — in their park, playground, yard, parking lot, street — and being ignored.



## 2. Don't pile on the fill

The addition of fill on a site is a common practice, especially during construction. When construction is in progress, levels of fill can be as deep as 5 feet. If the tree is on a slope — even deeper fill levels are possible. In other cases, trees may have shallow, surface roots (which probably already have mower damage) and fill makes it easier to establish turf and mow.

Why is fill a bad thing for most trees? Think about having a large person sitting directly on your chest. How much oxygen would you be able to get into your lungs? How long could you keep breathing in that situation? Put simply, the roots of the tree require oxygen in order to do their job. The addition of fill will reduce the availability of oxygen and, in essence, smother

the roots. For some trees like tulip poplar or beech, the decline and death of the tree can happen fairly quickly. For others, it may take as long as three to five years before the tree finally dies.

## 3. Plan ahead

So what can you do?

- When planning for new trees, know which tree species are good for specific situations (size, light, moisture, etc.). Utility companies, state extensions and associations are good sources.
  - When planting trees, check the root ball for moisture and good root condition. Get the tree into the ground with minimal delay. Emphasize the need for regular watering.
  - Do not install support stakes unless the site requires it or the tree is large. Where support stakes are necessary, remove them after a year.
  - Maintain a mulch ring around the base of the trees — a ring two to three inches deep that doesn't touch the trunk. This reduces the chance of injury by mowers or string trimmers.
  - Suggest perennials under trees so that the root disturbance happens only once.
  - When relandscaping or during construction, decide if the tree is valuable and should be saved and then protect the tree from as much damage as possible. Limit construction activity to outside the dripline of the crown and recognize that changing the grade, even away from the tree, can change the way moisture moves on the site. A certified arborist can help.
  - If you see conks, cavities, decay or dead limbs, advise that the tree be inspected by a certified arborist for potential hazard, particularly where a target exists (buildings, playground, etc.).
- Reducing damage and other insults to trees will help to increase their life and value. If you don't like trees, consider this a guide for saboteurs. **LM**