

Your garden in November – trees & their roots

Twenty years ago, the worst hurricane in living memory stormed over southern Britain, ripping through our woodlands and forests leaving a trail of destruction. Entire landscapes changed overnight. Trees that had stood for hundreds of years were gone.

And yet out of this destruction came good. Our thinking about trees was also about to be uprooted. At all once here was a wealth of new data about what goes on under a tree. The Royal Botanical Gardens at Kew surveyed more than 4500 uprooted trees alone.

Until the great storm, it was generally thought that a tree's roots only extended as far as the edge of the tree's crown, a common misconception still held today. In fact, trees typically have a relatively shallow but widespread root system, with 80-90% of a tree's roots within the top 60cm of soil, and extending beyond the edge of the crown.

Different species of tree have different rooting behaviour. Oak for example has a strong main taproot, whilst cherry, ash and birch have surface root systems. You often find these pushing up tarmac and paving.

Apart from species, the biggest factor in determining what a tree's roots will

do is the soil type. We forget that a tree's roots needs the same conditions (apart from light) that the branches and leaves need, namely water, air, and nutrients. Roots can't grow very far into soils where they meet resistance, either from hitting the bedrock, a concrete foundation or meeting a hard pan of compacted soil (more common in clay soils).



All roots need oxygen to respire. When the airspaces in the soil are reduced, either by waterlogging or compaction, root growth will slow and eventually stop. And while fertile soils produce strong, healthy, well-branched roots systems, infertile soils do not. It's not rocket science!

So how can you help the trees in your garden?

- Reduce compaction by not walking, driving, mowing under a tree.
- Mulch regularly to provide nutrients, retain moisture and improve aeration via worms.
- Don't build a patio or lay any impervious surface underneath a tree.
- If you must mow under a tree, be careful not to strim the trunk.

Trees are a vital part of our landscape and we need to look after them.