



To fell or not to fell; that is The tree management question!

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UK arboriculture is developing at breakneck speed; climate change is pushing trees up the urban management agenda and consulting arborists are struggling to match the pace. Jeremy Barrell, at the helm of one of the UKs most successful tree consultancies, explains why the shortcomings of the past must be rectified, and quickly, if arboriculture is to deliver the full potential that trees have to offer in the tough times ahead.

Over the last five years, an outsider looking in on UK arboriculture will have seen a young profession striving to design systems and procedures for integrating trees into the emerging urban infrastructure. On a practical level, successfully establishing trees in the hostility of urban conditions is a relatively new challenge and there is still a long way to go before the right trees in the right place will be consistently performing to a high level. From a management perspective, defining and organizing all the tasks necessary to achieve that performance level and successfully integrating them into existing rules and regulations is dauntingly complex. Such administrative and technical hustle is alien to many tree enthusiasts, who chose arboriculture through a love of trees and the tranquility they represent. Not surprisingly, in such unfamiliar territory with so many distractions, it has been tough for consulting arborists to identify what really matters and stay focused on it.

A good example of this lack of focus is the emergence of hazard in recent years as one of the highest profile issues within arboriculture. Many UK consultants have been quick to jump on the hazard bandwagon, seeing it as a means of justifying their existence and establishing their credentials in the wider professional arena. Superficially, such an approach is understandable; tree failures can grab spectacular headlines, with tree experts having their moment of exposure and a mechanism to generate more work. Fuelled by several high profile court cases and extreme interpretations of those judgments, trees have been cast as the demons, with a focus on their disbenefits. Of course, hazard is an important issue, but does it deserve such a large proportion of attention? Seemingly not if one takes the commonly quoted UK statistic that an average of six deaths a year in a population of 60 million people produces a risk of 1:10,000,000 of being killed by a falling tree. By any measure, this extremely low risk hardly seems to justify the obsession we have seen.

Although this disproportionate emphasis on risk is disappointing, the attitude of UK arboriculture is

subtly shifting as the reality of global warming begins to bite. The astute have realized that an alternative to scavenging around the edges of the disbenefits table is to promote tree benefits, and there are many of them. The most politically persuasive include buffering urban temperature rises, attenuating storm water runoff and measureable public health benefits. Politicians in central government have realized that more trees means more votes, and there is a raft of emerging UK policy echoing this theme. Trees are rocketing up the list of priorities in urban management and the challenge for consulting arborists is to develop systems, procedures and best practice guidance that will deliver what our cities will soon be demanding.

In the UK, there is a common perception, backed up by limited research, that our urban canopy cover has been decreasing for some time, which is at odds with the emerging drive for more trees. Existing trees are being lost for a host of reasons including subsidence claims on clay soils, demand for new housing and anxieties about safety. Even worse, new trees are not successfully establishing because of poor planting practices, inappropriate species selection and inadequate aftercare. All of this is resulting in our existing heritage of big trees being eroded and insufficient new trees surviving to replace the losses. Clearly, the need for consulting arborists has never been greater, and with that comes the need for them to develop robust systems and procedures that can reverse the urban deforestation trend and deliver the tree benefits that will soon be desperately needed.

Although planting new trees is obviously important in the context and imminency of global warming,, maximizing the benefits of existing trees deserves a much higher priority because they are already established and delivering their benefits. In the past, the loss of existing trees was not that much of an issue because time was on our side and new planting offered a tolerable compromise. However, time is running out and the need to make balanced decisions about existing trees has never been



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greater. To fell or not to fell is one of the most testing puzzles that modern arboriculture has to solve and going right back to basics is essential if we are to design a solution that will step up to the mark. Traditionally, the assessment of tree quality has been based on characteristics that are perceived to add value, such as good form, long life expectancy and size. The dilemma with this approach is that it seems right, but determining value is notoriously unreliable because there are so many extremely complicated elements to consider.

Barrell Tree Consultancy first identified the need to go back to basics in the 1980s when we had to properly account for trees in the massive housing re-development programs around London. Our first tree assessment methodology was called SULE, standing for Safe Useful Life Expectancy, which recognised the importance of the length of time a tree could be safely and usefully retained as a primary categorization criterion. During the late 1990s, SULE evolved into TreeAZ to take better account of the modern planning arena, where trees were becoming an increasingly important consideration in urban redevelopment. Today, tens of thousands of trees around the world are assessed annually using TreeAZ, and its evolution is driven by the feedback from this extensive field testing program. Although originally developed for construction sites, its principles can be applied to all tree management scenarios, with 'sister' versions being developed for assessing street trees (TreeAS) and the suitability of trees for preservation (TreeAP).

TreeAZ is different from all other tree assessment methodologies because it approaches the quality/value/calibre of trees from a counterintuitive perspective. Instead of assessing all the good things about trees, which would be a particularly tricky task, it focuses on the bad things that would justify felling. If there are no valid reasons to fell a tree, then it is considered good by default and quantifying the amount of 'goodness' it has is frequently unnecessary. The significant advantage of this approach is that it effectively side-steps the difficulties of calculating value, providing a means for tree managers to make consistently reliable and defensible decisions without the complications found in valuation methodologies.

A central assumption of TreeAZ is a starting point that all trees are good; it then systematically reviews the factors that could reasonably result in them being felled and, if they pass all those tests, then they are worth retaining. All trees start as 'A' and if they could be reasonably removed for any reason, then they convert to 'Z' during the

assessment process. Category A trees can convert to category Z for four main reasons:

- **Policy exemptions:** TreeAZ acknowledges trees that cannot be protected under local legislation by categorizing them as Z. This varies on a local level and can include trees below a predetermined size threshold, trees that are very close to buildings and invasive species that are officially recognized as noxious weeds.
- **High risk of death or failure:** Trees that are not going to live very long or are likely to fall apart in the near future have very little potential to contribute to future amenity and are valid candidates for removal.
- **Excessive nuisance:** TreeAZ recognizes that the living conditions of people are important and trees that cause nuisance and inconvenience become less suitable for retention as the problems they cause become more extreme.
- **Good management:** An often forgotten principle, but of vital importance in the wider management context, is the sustainability of the whole tree population. Individuals that detract from the good management of the wider population are valid candidates for removal.



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Any tree that passes all these tests remains category A, and is given more weight in the decision making process than trees that are converted down to category Z.

Instinctively, we all know that trees are good but their many benefits are offset as individual trees become more of a hazard, more of a nuisance and more of a management problem. TreeAZ's systematic structure allows tree managers to reveal their decision-making process in a transparent way, significantly increasing the prospects of robustly refuting any criticism, should any harm arise from their decision. Although counterintuitive at first glance, TreeAZ works so well on a practical and technical level that it is rapidly becoming the default method of tree assessment around the world. Our experience is that valid and sustainable reasons to remove trees underpins all tree management decision making. Understand this and many of the contradictions, dilemmas and conundrums that surround tree management become a lot easier to resolve, irrespective of whether you are in the UK, Australia, New Zealand or the US.

With a pedigree of 25 years of development and origins in fundamental tree management principles, TreeAZ has the strength in depth needed to meet the professional challenges that are already with us. A common measure of all professions is the caliber of the systems and procedures they design. TreeAZ is an example of the level of detail and sophistication needed if arboriculture is to deliver the tree benefits that will desperately be needed when the full force of global warming hits home.



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You can find out more about Barrell Tree Consultancy at www.barrelltreecare.co.uk and the TreeAZ suite of products at www.TreeAZ.com.