barrell
TREE CONSULTANCY

Tree assessment for planning

The AA ArbNews (Spring 2016)

BTC/113/2016

barrell TREE CONSULTANCY

Tree assessment for planning

The AA ArbNews (Spring 2016)

From March to May this year, in association with Barrell Tree Consultancy, the AA is running a nationwide series of five two-day workshops to bust the myths of managing trees on development sites. In this article, Jeremy Barrell, reviews the background to tree assessment and sets the scene for a new evolution of the BS 5837 method that will be launched at these events. Designed to take the mystery out of the process, this enhanced method will draw on decades of experience from more than 5,000 development projects to provide a depth of analysis that has so far been missing from all the published literature.

Is simple better than complicated?

The trouble with experts is that they often know a lot about the detail, but very little about the wider world within which their fragment of knowledge sits, and the proof is all around us. For example, take conferences; how many presentations have you seen where academics take huge pride in regurgitating screens of text that cannot be read and flicking from one graph to the next with little explanation. Doubtless, they revel in the self-justification that the more mystery and confusion there is, the more the dumb masses need them to sort it all out; from their perspective, an academic success, but the reality is a communication disaster, and yet it happens time and time again! Here is another example, a little more hidden, but equally as disappointing. There seems to be an obsession in arboriculture to make risk management as complicated as possible when the courts are looking for exactly the opposite, i.e. simple explanations that any ordinary person can understand. And yet, I frequently witness experts going into minute detail about fungal biology or the detailed calculation of the level of risk, when all the court wants to know is could an inspector carrying out a quick visual check have discovered the cause of the failure!

Unfortunately, the mind-set that the more complicated we make it, the cleverer and more expert we are, lives on, and nowhere more so than with trees and planning. UK tree assessment is currently forced to use the dated tree assessment method outlined in *BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations*. Its origins go back to the 1970s and there is no further published supporting explanation at all beyond the couple of pages in the document. Although the overall approach works, the lack of published clarification on the detail is a limitation in need of improvement.

The role of arboriculturists within the planning process

A good starting point for arboriculturists is to understand what their role is in a planning process that has three distinct stages; design, decision and implementation. That role is different at each stage; in design, they advise and inform the designer about tree constraints; at the decision stage, the objective is to make sure all those viewing the submission have sufficient information to reliably assess the tree issues; and finally, at implementation, the role changes to overseeing tree protection. It is of fundamental importance for arboriculturists to understand that they are not the decision-makers and their role is not to decide if a tree should stay or go. Their role is to assist the decision-maker in assessing and weighing all the competing material considerations, of which

trees are just one of many, and come to a balanced and informed decision on whether to consent or refuse an application to alter land use. Ultimately, it is the planner who decides if a tree stays or goes, not the arboriculturist, who is just one consultee in a much bigger framework.

Practical tree assessment sits within the design stage of the process, where the information is used by architects to evolve the design. However, that same information is of critical importance in the decision-making stage as well, where it has to be interpreted by other planning professionals, the general public, and the elected members. One common characteristic of all these people is that they are unlikely to have any detailed knowledge of trees, which has to be a primary consideration for arboriculturists intent on being helpful in the process.

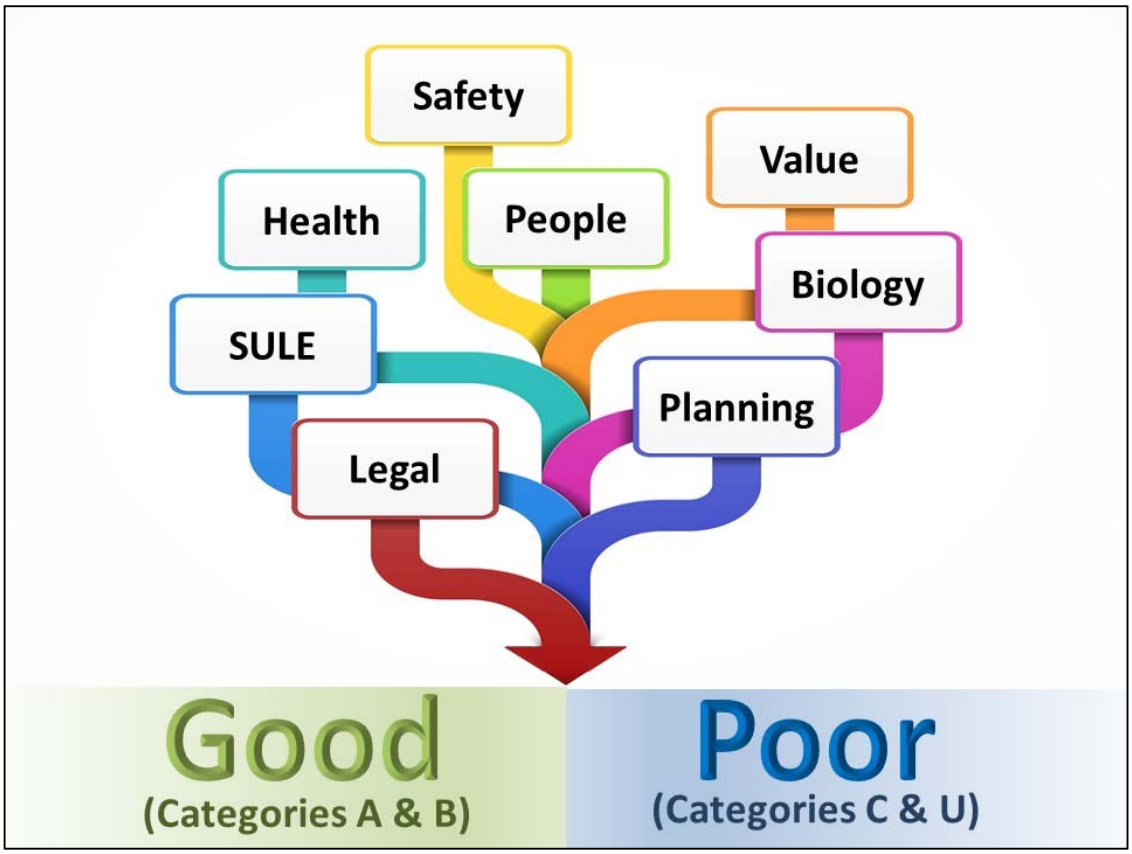
Under such circumstances, the obvious role of all professionals is to distil all the complication of their specialism into explanations that ordinary people are able to understand (Image 1). Of course, tree assessment is complex, requiring technical knowledge and experience to do it properly, but that has to sit in the background; considered, but out of the way. That distillation process has to focus on what the users want to know and no more. Invariably, that can be summed up as "is the tree worthy of retention or not"; is it good or bad; should it be a material constraint, yes or no. So, the back end of the process can be as complicated as arboriculturists want, but the front end for the non-tree experts must be simple to understand and easy to use.

What are important assessment criteria in a planning context?

In principle, the purpose of assessing trees for planning is to assist the decision-making process on how to use land most effectively to meet a set of predefined criteria set out in national and local planning guidance. In order for tree assessment to be useful, it is necessary to identify and quantify the physical tree characteristics that affect the amount and quality of benefits. It has long been accepted that trees do provide significant benefits, with increasing volumes of research confirming in broad terms, the bigger the trees, the greater the positives are. However, trees can also cause harm and inconvenience, and require disproportionate maintenance costs, which are negatives that must also be accounted for in any effective assessment.

In practice, the identification of assessment criteria is more difficult than it would seem at first glance. Intuitively, the bigger a tree is, the more benefits it is likely to impart, but the credibility of that superficial assumption rapidly falls away in the context that planning is about designing for the future and so the length of time a feature is going to be present is of importance. For example, a large tree is obviously of high value, but if it is not going to live very long, that value is rapidly transient and of little importance beyond the present. Obviously, size matters, but so does the length of time that a tree can deliver benefits into the future. Furthermore, safety, inconvenience, good management and excessive maintenance costs could all be valid reasons why a big tree with the potential to live many years, may have to be removed well before the end of its life, and therefore limit its long term delivery of benefits. All these matters are of

importance and a credible assessment method must provide a framework within which they can all be factored into the decision-making process.



The role of the arboriculturist is to distil the complication of tree assessment into simple information that other planning professionals can easily understand. In its simplest form, trees are either Good (BS categories A and B) or Poor (BS categories C and U).

Considering that size is an important primary indicator of value, it is a little surprising that the BS method makes no mention of it whatsoever, instead choosing to focus on remaining life expectancy! This approach has obvious limitation, e.g. most small trees will have a long remaining life expectancy, way beyond the 10, 20 and 40 years advocated in the BS as boundaries between categories, so they can be placed in any category the assessor chooses (Image 2)! Similarly, a tree 5m in height can have the same category as a tree 25m in height (Image 3), an inconsistency that is confusing to say the least! As many of us will have experienced, such inconsistencies are a charter for hired-gun experts to manipulate data to suit the needs of their paymasters, and is a regular source of mismanagement. One of the key objectives of the enhanced method is to make it more difficult for such abuses to succeed.

These beech trees range from young to maturing to mature, and all have more than 40 years of life left in them. In theory, each of them could be categorised as either A, B or C, according to the BS 5837 guidance, an inconsistency addressed in the enhanced method.

Other matters in need of review

- **Categorisation:** In its purest form, the concept of distilling complex tree assessment into a simple form translates into assigning trees to one of two main categories: good trees that are worthy of being material constraints, which should be given significant weight; and, poor trees that are not worth bothering with, which can be discounted as material constraints. The end user doesn't need to know any tree details to be able to understand and work with this approach. In contrast, the BS method has a rather confusing four-tier category arrangement of "high quality" (category A), "moderate quality" (category B), "unremarkable trees of very limited merit" (category C) and "unsuitable for retention" (Category U). Furthermore, users have to guess whether category C trees should be kept or not, which is of little help for decision-makers looking for simple answers. These deficiencies have proved to be a regular source of confusion, prompting the enhanced evolution based on two main groups, i.e. trees that are worth keeping and those that are not (Image 1).

At what size does a young tree that can be easily replaced transition from a category C (the tree on the left) to a category A (the tree on the right)?

- **Small trees:** Small trees have the potential to live for a long time, so it is easy to argue they are very important in the future. However, they are not big in the present and so why should they be given significant weight? Stepping back and considering the purpose of the assessment exercise offers some help here and leads to a compromise that makes sense. Planning is concerned with the contribution of land to local character over the life of the development, which is usually measured in decades. In that context, it is not each individual tree on a site that matters, but the tree cover over the site as a whole; whether that is provided by an existing tree or a new tree is of little consequence as long as the overall contribution of the site to local character remains the same. Adopting this perspective unlocks the option to replace existing trees with new trees as long as it is feasible and the future contribution remains unchanged. It is clearly a planning nonsense that small trees should be able to dictate the long term use of any site if they can be reasonably replaced, and so we have abandoned this approach in the enhanced method.
- **BS 5837 subcategories 1, 2 and 3:** Another feature of the BS method that adds complication and confusion at the expense of clarification is the three subcategories (1 = arboricultural qualities, 2 = landscape qualities, and 3 = cultural qualities), which it advises should be applied to category A, B and C trees. This approach offers little obvious benefit and the enhanced method discards it as an

unnecessary burden in favour of the much more relevant consideration of whether there are any justifiable reasons to remove the tree. Our experience is revealing that trying to describe what is good about trees is very difficult. Instead, it is proving to be much more helpful to start from a default that all trees are good and focus on identifying what features could justifiably lead to removal.

Even for complex plans, using a combination of colours and symbols allows the good trees (green triangles) to be easily visually separated from the poor trees (blue rectangles).

- **Colour coding:** The visual identification of tree category is very useful and the enhanced method advocates using two colours; green for good and blue for poor. Additionally, the use of shaped number symbols is added to further enhance category recognition, so good trees are shown with green triangles and poor trees with blue rectangles. This approach can be neatly adapted to illustrate really good trees with a double green triangle, good trees with a single green triangle, poor trees with a single blue rectangle and really poor trees with a double blue rectangle. This offers a very effective means of gaining a quick overview of the distribution of good and poor trees around the site from a quick glance at the plan, taking no more than a few seconds (Image 4). Most importantly, it is easy to understand and use by people who know nothing about trees.

In summary, BS 5837 is a very useful document in general terms, but its practical use is revealing that the tree assessment method would benefit from more detailed explanations. BS 5837 makes provision for modifying such dated aspects in the Foreword:

"Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.".

The enhanced method offers a much needed evolution, retaining the overall BS framework, but providing important clarifications based on emerging professional experience. A formal guidance document explaining this enhanced method will be published towards the end of 2016, but it will be exclusively available for delegates at the AA workshops to be held in Bracknell (09/03/16), Illminster (23/03/16), Edinburgh (06/04/16), Preston (20/04/16) and London (04/05/16).