



**barrell**  
TREE CONSULTANCY

BS 5837 (2005): Six months on – success or failure?

*Article in AA Newsletter Issue 132*

BTC/21/2006





## BS 5837 (2005): Six months on - success or failure

Jeremy Barrell believes that BS 5837 is important because it is one of the few documents where UK arboriculturists can say 'this is what we do and here's how we do it'. Its recent revision was a fantastic opportunity for them to stand up and be counted, and yet there was not one collective whisper. We saw individuals and interest groups voicing their opinions, but no combined or coordinated representation from the Profession. Jeremy believes that such a weak input into a document of this importance is a matter of grave concern for anyone interested in elevating arboriculture into the realm of an effective and respected profession.

Although the new BS is still less than six months old, its introduction has already caused significant changes in the way we work as consultants and how trees are being dealt with in the planning process. There are some tremendous improvements that deserve recognition because they are already benefiting trees. Recognising success is obviously important, but optimising progress requires the scrutiny of failures as well, which can be a painful process! The 2005 revision is no exception, with its fair share of disappointments diminishing the obvious achievements. In this review, I will explore what has worked well, what has not been quite so good and what are the implications for arboriculture.

Before I share my opinions, it is relevant to set out the credentials I bring to this analysis and dispel any misconceptions about my views on 5837. Although I have been vocal in my criticisms of certain aspects of the 1991 version, I have always been supportive of the document in general. Most of it worked to a fashion and I used it to the full to argue the case for trees. My main complaint has always been against the survey section because it had no depth; it is riddled with inconsistencies and does not withstand even superficial probing. It was such an amateur method that I designed one that did work in 1983 called SULE, which has recently evolved into TreeAZ. As a consultancy practice, we have dealt with thousands of development sites and assessed tens of thousands of trees. My review is based on that vast practical experience rather than being the armchair analysis of a compulsive moaner!

### What works

Even after such a short time, we see the new BS having a significant impact on the weight being given to trees in the planning process so, by that criterion alone, it is certainly a success. Here are just a few areas that have impressed us:-

- **Empowering the arboriculturist:** Its upgraded status from 'Guidance' to 'Recommendations' seems to have had a big impact. At last the message is getting out there; arboriculturists are the people to be advising on tree issues, not



Jeremy Barrell: BS 5837 (2005) proves that desk exercises don't deliver.

landscape architects or self-taught land agents. We are seeing council officers sending back surveys that are not done by arboriculturists because it states that requirement so clearly in the BS. That is a dramatic improvement over the 1991 version. Throughout the revision, the emphasis on 'arboriculturist' and 'competent person' is having a big impact. Well done to the whole review group for identifying and implementing such an important change.

- **Timing of instruction of arboriculturists:** Similarly, specific recommendations relating to timely instruction of arboriculturists at the early stages of planning (4.2.3 & 4.5) is allowing council officers to emphasise this point to developers. As consultants, we are also able to do the same.



## BS 5837 (2005): Six months on - success or failure

The spectre of criticism at appeal for planning applications that do not involve the early appointment of arboriculturists seems to be focusing developers' minds. It is noticeable that we are getting more early instructions, which is good for us and trees!

- **Protective barriers:** Effective barriers probably make the most significant contribution to successful tree retention, so it is important that they are given sufficient emphasis in the BS. The concept of them being 'fit for purpose', with the focus on robust, braced and secured barriers is well set out in 9.2 and Figure 2. Another great bonus is that all references to that old developers' favourite of chestnut paling is gone, hopefully for good! Although it is disappointing not to see wooden fencing mentioned, as that can be equally as effective, the concept is right and it will benefit trees. Well done again to the review group.

- **Establishing the root protection area (RPA):** Congratulations on getting this off to a flying start. The concept of the trunk diameter multiplier to establish the RPA radius as the basis for calculating the RPA is a workable approach to a difficult problem. Although it still needs some work on modifications from the general rule, it is a significant improvement. The idea that the RPA should be flexible and interpreted by an arboriculturist is also the right approach. Correctly establishing RPAs is not simply a matter of inserting measurements into a recipe to arrive at an answer, as the hordes of DIY cost-cutters would like to believe. One of the most refreshing aspects of the new BS has been to watch these people struggle to work it out, only for the realisation to slowly dawn that it is slightly more complicated than they first thought! The concept of RPAs is an important innovation because knowledge about how trees grow and where their roots are likely to be is needed to apply it. Although still in need of some polishing, in one stroke, this has cut out all the DIY tree experts and moved arboriculture up a notch – so a gold star for whoever championed that particular cause.

- **Construction method statements:** Often missed because it is not obviously about trees, is the construction method statement. How many times have councils heard the promises at the planning stage only to then be bombarded by how impossible it is to build once the construction starts? Construction method statements are an essential part of bridging the gap between planning and implementation. The logistics of how sites function can have a dramatic impact on trees and we need all the help we can get to be able to push for it to be properly considered at an early stage. The emphasis on getting demolition into the loop early is also important. As consultants, we are constantly

agreeing very detailed protective measures in the planning stage, only for all that work to be completely annulled by the early and unheralded arrival of the demolition team. We are now regularly seeing council officers demanding this detail so the review group's efforts to significantly raise the profile of these important logistical issues has yielded fine results.

- **New planting:** Development is very much about compromises and often good trees do have to be sacrificed, so new planting is an extremely important means for arboriculturists to mitigate any adverse impact. Optimising land use by tree planting in parking areas and sustainability of trees near buildings through careful selection of species are essential design considerations set out in sections 13 and 14. It is also refreshing to see emphasis placed on the legal duty of councils to provide space for new trees when granting permission by acknowledging that, even if there are no trees on the site, areas for new planting should still be considered as a constraint (6.2.2). Again, seemingly small issues but with the potential to have a big impact on future tree cover, so their emphasis is to be applauded.



Jeremy Barrell and Dave Cashman: Amsterdam pioneered root deflectors and structure tree soil and a means of multiple use of space, an idea embraced in the new BS



## BS 5837 (2005): Six months on - success or failure

• **Structures within RPAs:** One of the most important practical developments since the 1991 document concerns the installation of structures within RPAs. If properly specified and implemented, structures can be installed close to trees without any significant adverse impact and this is acknowledged in the BS. The reality of most inner-city construction sites is that RPAs have to be compromised and section 11 acknowledges that the impact on trees can be minimised through special precautions. More detail in the form of diagrams would have been helpful, but this is a good start.

• **Documents and plans:** Three of the most important documents used in the planning process are the tree constraints plan, the impact appraisal and the method statement. Although the detail of how they fit into the planning process is not well organised, they are all recognised and described to some extent, which is helpful in raising awareness that they should be used. It has also been particularly useful to have the land survey requirements clearly set out. More and more councils seem to be checking submissions and, if the supporting tree information does not comply with the BS, they are not being registered. Legal or not, this strategy is rapidly becoming a standard approach and is

ultra effective at making developers take trees seriously at an early stage. We all owe a great debt of gratitude to those few pioneering tree officers that have championed this approach.

*Amsterdam: Selection of tree form to avoid future conflicts is a strong theme in the new BS*

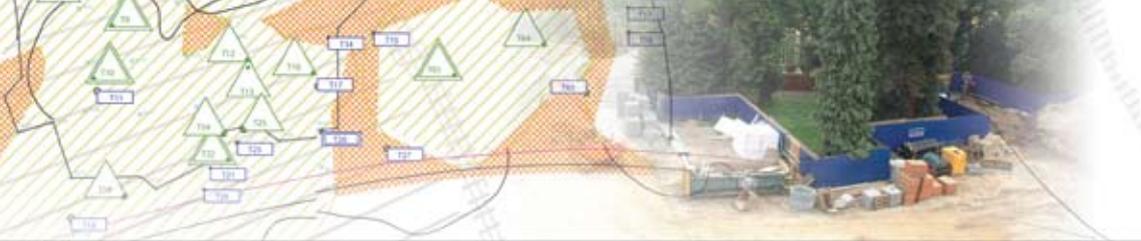
What doesn't work

Although in some aspects, the revision could be considered a success, its presentation, depth and attention to detail require significant improvements before it will be a document for arboriculturists to be proud of. Here are just a few of its weaker points:

• **Tree survey method:** Twenty-five years ago, in line with the BS, I thought that four categories was a good idea. But my interactions with councils and developers continually suggested that it was all too complicated. The feedback was saying that all they wanted to know was which trees were worth keeping and which ones were not; two simple categories – good or bad. It was hard to change because this was not a small matter, but we did it because we are driven by finding solutions to business problems. In contrast, the BS method still desperately clings to that outdated wisdom and dismally fails to deliver a modern day solution. Wishy washy C trees that can go either way are no help to anyone; arboriculturists are the tree experts and they should be providing clear guidance to designers who generally know little about trees. Another thing we spotted was that if trees could not be legally protected the owner could remove them, so how could they be a material constraint? To fit into the wider planning model, the method must be linked to legal tree protection. Our informal research revealed that 10 years is the widely accepted threshold for retention. If a tree could be retained for more than 10 years it is worthy of a TPO, any less and it is not. This dictates a SULE (safe useful life expectancy) of 10 years as the threshold for categorising whether a tree can be a material constraint or not. And yet in the BS, that threshold is set at 20 years; clearly out of sync with conventional wisdom, our research and common sense! The reality of failing to recognise this issue is that good trees are being lost with little chance of proper mitigation. These are just two of numerous failings in the BS tree assessment method that I will be dealing with in a more detailed future article.



◀ Amsterdam: Selection of tree form to avoid future conflicts is a strong theme in the new BS.



## BS 5837 (2005): Six months on - success or failure

- **Inconsistencies:** Inconsistencies create an amateur, rushed and rather superficial feel to a document. In contrast, the hallmark of a professional approach is the absence of errors and inconsistencies, achieved through attention to detail and depth of background preparation. This revision has repeated inconsistent use of abbreviations and phrases. Figure 3 is a good example; the word 'fencing' is used twice when it is referred to as 'barriers' throughout the text; and the edge of the RPA is annotated at the centre of the trunk, which just cannot be the case! Here is an example of conflicting statements – "6.1 Trees are material considerations in the formal planning system," and then "4.3.4 Category R trees .... should not be a consideration in the planning process...". It is easy to play down the importance of the odd error but these are not isolated and their cumulative effect is to undermine the credibility of the document. The unavoidable knock on effect is to tarnish arboriculturists and the credibility of the Profession.

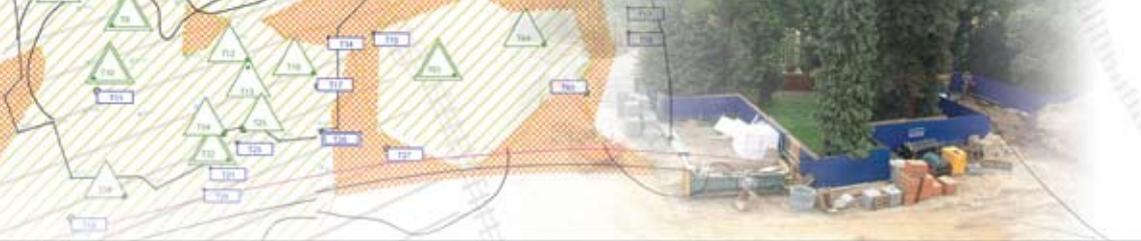
- **Recipes:** We saw in the 1991 version how recipes can be abused with unscrupulous arboriculturists and non-tree experts alike applying the one-third rule en masse to every tree that was a problem. The 2005 revision makes significant progress in

empowering the judgement of arboriculturists by emphasizing the need for subjective interpretation, only to then diminish that benefit by providing an objective recipe. Non-experts clamour for figures because they do not have the experience and understanding to support a subjective solution. As with the one-third rule, I think we will find that the 20% RPA displacement rule is the chink that the budget-designers are looking for. It is an unfounded, ill-conceived and regrettable addition.

- **Definitions:** The 1991 version threw up some quite difficult problems through slack use of terminology. Lessons to be drawn from that experience included 'vigour' should have been 'vitality', 'low vigour' is simply an opinion and the boundary between 'young' and 'maturing' is very blurred! These characteristics have no objective definition and to include them as the basis for decision making is confusing and unhelpful. Similarly in the 2005 version we have the same problem although different words. Where are the definitions for 'remaining contribution' (Annex D), 'significant contribution' and 'substantial contribution' (Table 1) and 'open grown trees' (5.2.4a). At appeal, important decisions hang on words like these: it is helpful to clearly define them.



Barriers: one of the successes of BS 5837.



## BS 5837 (2005): Six months on - success or failure

- **The gulf between planning and implementation:** Even superficial research would have identified that there is a world of difference between what is agreed in the comfort of the planning discussions and what is actually done on site. The reality is that site operatives are not good at reading paperwork but they are good at interpreting plans and diagrams. Although this revision does set out the importance of plans, it fails to build on the great success of the fencing diagram in the earlier version. This was undoubtedly the most reproduced part of the old BS and for good reason – diagrams are easy to understand. More of them would have allowed us to clarify the principles to be applied to no-dig surfacing, pile and beam constructed buildings, sheet piling to retain deep excavations, etc. Simply copying diagrams and giving them to engineers or architects is a very effective means of communicating, opportunities that have been missed in this revision.

- **Composite plans:** It is not possible to reliably show where special precautions should be applied on either the land survey or the layout in isolation. There has to be a composite of both so that the precise relationship of the proposed to the existing can be clearly seen. As this is the basis for all the tree protection details and probably the most important plan we ever produce, it is a little surprising that it is not even mentioned in the new revision! Composite plans are an essential component of managing trees in the planning process and the review group knew about them. That makes their omission a serious error of judgement.

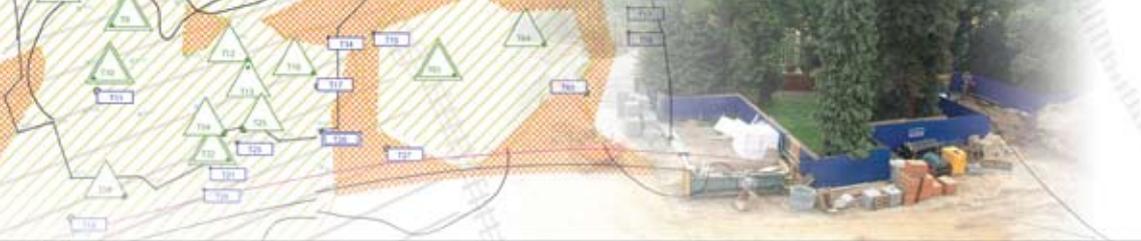
- **Levels:** Sloping sites require cutting and filling, both of which can seriously damage trees, so this is an important issue. Our experience is that architects and engineers just do not grasp the concept of no-dig when it comes to trees. A series of simple diagrams showing ground slabs and surfacing in RPAs with their lower extent above the existing ground level would have made our job communicating this misunderstood concept so much easier.

- **Landscaping:** A common experience for arboriculturists is to safeguard trees throughout the construction period only for all that effort to be ruined by the landscapers. This is primarily a communication issue that could have been addressed in the BS as a clause dealing with co-ordination of all the various contractors and document distribution. Landscape architects must refer back to the AMS before their designs are completed and the landscape contractors must be issued with that information. I believe that failing to address such a common cause of tree damage is a fundamental omission that will result in many avoidable tree losses.

## Where do we go from here?

Although there can be little doubt that the new BS is a significant improvement on what went before and the review group are to be congratulated on that count, there is clearly still a long way to go. Despite some excellent ideas, the document is permeated with practical nonsense that may seem credible from the comfort of a desk but fails to deliver in the harsh reality of site conditions. It is hard to follow and understand, which creates a slightly archaic rather than a modern feel. It is woefully lacking in the polish, depth, field-testing and quality of finish that is a standard requirement of professional practice at the highest level. Indeed, it is unlikely to have passed the peer review stage for any technical journal. I do not subscribe to the idea that perfection is unachievable so we should gratefully receive what we are given. To the contrary, I believe that performing any task to the highest possible standard must be the target for effective professional development, a benchmark that has not been achieved with the 2005 document.

Indeed, the interruption of the final print run to correct mistakes served to reinforce this aura of amateurism and the perception of rushing to meet some imaginary deadline. But we have been reassured that all will be well because annual revisions will allow errors to be put right as they emerge. Superficially, this idea does seem attractive, but scratch the surface and it all starts to fall apart. As those of us who have had to deal with the new BS know, its introduction has been tough. New ideas, new ways of working, different rules and different documents requires huge investment from the people in the system and it will take years for even the most adept to fully adjust. To propose regular disruptions to that stabilisation process demonstrates an uninformed perspective on the practicalities of implementing change on the scale that will be necessary to address the problems set out above. Shallow quick fixes directly resulting from a failure to do the job properly in the first place is an approach that will hinder, not help, our emerging profession. None of this is good for arboriculturists or Arboriculture. So where do we go from here and what lessons can be drawn from these events?



## BS 5837 (2005): Six months on - success or failure



Access and installing structures within RPAs is always tricky but possible in the revision, which is an important addition.

Although this analysis may seem a little harsh, my experience is that it is necessary to be realistic about past achievements to find a proper focus on future needs. I believe there is a compelling case for a complete re-write, but that is a huge task and cannot happen quickly if it is to be thorough. Here are some of the elements that I believe will be required to build on the experience to date:-

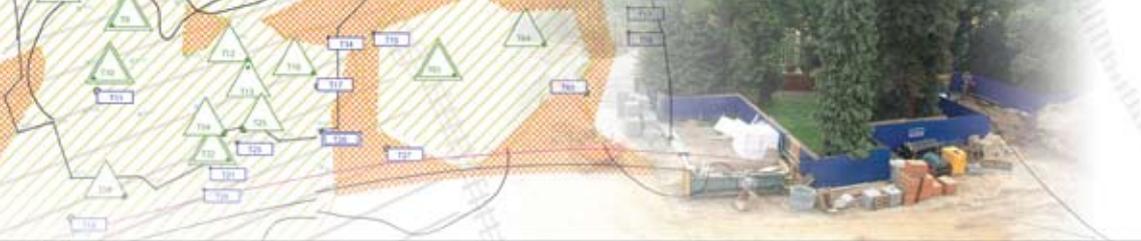
- **Control by the Profession:** Past events have clearly demonstrated that allowing a publishing organisation to rigidly administer the formulation of good practice guidance has not delivered a satisfactory result for the Arboricultural Profession. It does not have to be that way next time. It is the body of individuals practising at the professional level who control the essential expertise to achieve this, not any organisation; people make the difference here. Arboricultural good practice is for arboriculturists who are specialists in their fields to decide, not a committee dominated by fringe interest groups who know very little about trees. Of course, interested parties can be consulted when it is written, but to significantly influence its content, I don't think so!

- **Administrative framework for revision:** A re-write will require an administering body, which logically should be the lead body for the Arboricultural Profession. But the professional arena in arboriculture is still rapidly evolving and no lead body with a mandate to deal with professional matters has yet emerged. Until that happens, the final home for administering the task will remain unknown. Although that detail is still rather cloudy, my experience is that the mechanics of how it will work are much clearer. Large committees are not effective for whole host of reasons; it is a formula that has been tried and spectacularly failed. In contrast, small working groups of specialists working within an overall framework is effective because they are able

to evolve the detail to fit the broader format. A coordinating group of up to five members designing the framework and then administering smaller groups dealing with specialist subjects communicating via the internet is a modern and effective approach to problem solving.

- **Magnitude and timing of changes:** Interim updates are not a good idea because they will be disruptive and cause too much confusion when stability will be more useful. Unsatisfactory as it is, the reality is that we have a sub-standard BS and are now in a period of extended field-testing. Rather than tinker with minor changes and all the instability that will entail, it will be much more effective to accept it has deficiencies and work towards a complete re-write based on the experience of the next few years. Testing at public enquiry is the ultimate means of exposing the extent of the problems, but this will take years due to the timescales in the planning process. Realistically, it will be at least another five years before we will be even close to a satisfactory replacement.

- **Consultation:** A comprehensive consultation exercise, administered by arboriculturists, should seek views from practitioners before any significant drafting. It is essential to identify what is working, what is not and how the people doing the work actually feel about specific issues. A questionnaire backed up by an internet discussion group would provide a solid basis for the initial drafting framework. Specialists would then develop the detail within that structure to provide a consultation draft for general release, including responses from allied professions. Where appropriate, specialist field-testing would be commissioned to make sure that it all worked in depth. A final consultation draft would be an essential prerequisite to the release of the finished document.



## BS 5837 (2005): Six months on - success or failure

• **Tree survey method:** Tree assessment is a very important professional issue because it is not just difficult, it is immensely complicated! Proper assessment is the cornerstone of all tree management, requiring great depth of knowledge and experience to make sustainable and defensible decisions. This BS 5837 method does not work and does not stand up to even superficial scrutiny. It has no depth and its continued promotion through the BS is extremely damaging to the development and integrity of the arboricultural profession. Until there is a wide consensus that one method is the best, it is inappropriate to set out the detail of an untested method and effectively force its adoption. Such a dictatorial approach stifles innovation and prevents new ideas gaining any momentum. In the context of such obvious failings, I believe the detail should be removed from the BS and replaced with a statement of the principles. This would foster innovation, allowing new ideas to be tested and adopted by a process of consensus rather than the force-feeding that we have had to endure.

Although this BS revision process has delivered some excellent advances, it has also exposed how weak we are as individuals, which should be a stern wake-up call for our fledgling Profession. Fragmented and leaderless, with no clear home or practice framework, there is some significant work to do if Arboriculture is to wield the influence that it deserves. If 'could have done better' is the lesson of the past, then 'needs to do much better' must be the dictum of the future. A strong and well-organised Profession is desperately needed but it doesn't exist at the moment. The challenge for all of us now as individuals is to work towards a professional framework that supports in depth our attempts to argue the case for trees.

"Although still in need of some polishing, in one stroke, the RPA concept has cut out all the DIY tree experts and moved arboriculture up a notch."

"Throughout the revision, the emphasis on 'arboriculturist' and 'competent person' is having a big impact. Well done to the whole review group for identifying and implementing such an important change."

"Wishy washy C trees that can go either way are no help to anyone; arboriculturists are the tree experts and they should be providing clear guidance to designers who generally know little about trees."

"It is easy to play down the importance of the odd error but these are not isolated and their cumulative effect is to undermine the credibility of the document."

"As with the one-third rule, I think we will find that the 20% RPA displacement rule is the chink that the budget-designers are looking for. It is an unfounded, ill-conceived and regrettable addition."

"Simply copying diagrams and giving them to engineers or architects is a very effective means of communicating, opportunities that have been missed in this revision."

"Until there is a wide consensus that one tree assessment method is the best, it is inappropriate to set out the detail of an untested method and effectively force its adoption. Such a dictatorial approach stifles innovation and prevents new ideas gaining any momentum."

"It is woefully lacking in the polish, depth, field-testing and quality of finish ... Indeed, it is unlikely to have passed the peer review stage for any technical journal."

"Composite plans are an essential component of managing trees in the planning process and their omission is a serious error of judgement."

"Arboricultural good practice is for arboriculturists who are specialists in their fields to decide, not a committee dominated by fringe interest groups who know very little about trees."