

Philip van Wassenauer's comments on: A300 (Part 9) Draft 1 Version 1 Tree Risk Assessment and Tree Structure Assessment

I have provided specific comments by section number below. I would like to thank the committee for its preliminary work but suggest that the standard has a long way to go before it is in a form that is appropriate for the subject matter given the wealth of research and science and practice that are available today in 2010 internationally. The current standards do not reflect the complexity of this topic. I encourage the committee to step back and shy away from any arbitrary time schedules and reflect on the import of this document. I suggest a more thorough examination of international practices and standards in this realm. That will create a much more rounded and comprehensive approach to setting this standard.

Some general comments for the committee to consider:

1. Before we consider the hazards posed by any particular tree we also need to assess what the benefits of that tree are. We need policy on this matter that reflects the reason why we have trees in an urban setting and what benefits accrue to the people and other organisms that live among those trees. We do not have trees in urban settings to then just consider them as nuisances. Trees are planted and maintained for a multitude of benefits. In this standard we only see the view of trees as a potential risk or hazard. This philosophy should change and this is the chance to start that work. Arborists should be advocates for trees, not their worst enemy.
2. The infinitely small risk posed by trees should be more clearly recognized when we approach setting these standards. The risk to human safety from trees is extremely low; less that the risk associated with lightning strikes, childbirth etc. Far, far less that the risk of getting in a car, which most people do every day. Because the risk is so low and problems arise so infrequently, when an incident does occur it is grabbed and sensationalized by the media. The legal profession then follows and blows the significance of a particular case out of the water. We as arborists should be responsible for presenting a far more balanced and realistic perspective of tree risk, supported once again by the tremendous value of the benefits that we derive from trees. If we do not speak to these issues then the media and the legal profession will rule the day and the very few cases of tree risk to humans will continue to be presented way out of proportion with the reality of the situation.
3. Consider the legal framework that these issues are framed in. **Civil law** requires us to act in a reasonable and prudent matter. **Criminal law** – requires that we have a duty to people who could be affected by our work. If we consider the small risk actually posed by trees as opposed to the perceived risk, is it appropriate to put inordinate amounts of effort into the risk management of these trees that actually pose very little risk?
4. Great Britain is in the process of addressing this issue as well. They have been in discussion for years, not months. I understand that there is a draft document coming forth from industry stakeholders to give guidance on this subject. It will likely have seven chapters:
 - a. Introduction
 - b. Benefits of trees
 - c. What are trees? Tree Biology
 - d. Risk – Real vs. Perceived

- e. Legal Considerations
 - f. What do you do? How to assess trees for risk given the preceeding framework established in items a – e.
 - g. 7 Scenarios to give guidance on each chapter.
5. I believe that we have an opportunity to wait for this document, investigate the process that has lead to its creation and see if we can strengthen our approach with some of the ideas and concepts that come out of their process. Why not wait to get the benefit of all this knowledge and hard work on the same topic? Their process has been a much more thorough and broad process than what I have seen with this standard so far. They have considered the expertise of many individuals who are not arborists. We should do the same. Many other professions have significant bearing on policy in this realm.
 6. Look to other countries such as Germany which have recently revised their national standards. There are other countries to consider as well. Seek input from all areas to ensure that this standard is in line with **current, international** thinking about the risk of trees....it is the same anywhere that humans live among trees.

My specific comments on the document appear below and reference the numbers in the current drfat of the standard:

- 90.2** This exception is too broad...risk may be significantly overstated in post emergency storm situations. The trees that survive the storms should be mostly looked at for preservation because they have just survived the "big test" that nature provides us...they passed the test. Rather than exempt this situation, this document should provided guidance for how post storm assessment should be accomplished. Maybe see FEMA's work on their protocols as an example.
- 90.3** Need much stronger experience requirements stated here in the standard...this is too vague. How is "experience" defined? There should be a minimum 7-10 years experience and demonstrated practical experience with qualitative and quantitative risk evaluation methods.
- 90.4.2** In what ways does this document need to comply with the other documents? More importantly this document should comply with current international standards or approaches to risk. Look further afield than the USA.
- 92** There is no definition of defect here yet this term is used extensively in the text of the standard. Defect is also in the eye of the beholder. This is a tricky area and needs good and explicit definitions. Here is an example: *defect – a condition present in a tree that is changed from normal growth or development, such as decay, a cavity, a wound to the cambium. Defects in themselves do not create hazards.*
- Critical** to have all of these definitions in the standard and open for discussion as soon as possible. This current draft is actually quite meaningless without them.
- 92.2** To me this does not describe the attributes of a tree risk assessment specialist. Specific and significant time and experience in this are required.
- 93.2.1** What is this level? It should be here in the standards not in the BMP's. Describe specific experience levels for various levels of assessment if the standard is going in that direction.

- 93.3.2 (#3)** Should Oral even appear here? Any form of defensible risk assessment needs to be documented in some form to be even marginally defensible. No? I say drop oral out.
- 93.4.1** This is usually determined by the initial assessment in my world and is rarely specified explicitly at the outset. So when does this specification come into affect?
- 93.4.2** What is the adequacy threshold here? Also as above, what is a defect? Should we even be using this term? Each "defect" in a tree can usually be easily characterized as habitat for other tree associates. So perhaps we should also be evaluating these features as habitat value and balance that against "risk" value. This type of Philosophy should be part of the thrust of the standard and not solely the evaluation of trees for removal as risks. The goal should be retention. This should be within the spirit of this standard.
- 93.4.3.1.2** What are these? Obvious to whom? Far too vague.
- 93.4.3.1.3** Drive-by should have no place in this standard. Period!!!.... This should say something like ground based or aerially based visual inspection; driving by is not risk assessment by any definition...
- 93.4.3.1.4** Who specifies and when?
- 93.4.3.1.5** Yes but the wording should not imply that all of these things are required in every case. Maybe add "**Where required**, periodic assessments....."
- 93.4.3.2.3** Is this "standard" tool not covered in the 93.4.3.2.2 above? Why do we need a specific line in the standard to direct mallet sounding? -This is just one hand tool method, why the emphasis? What if new tools become available...do we then have to revisit the standard?
- 93.4.3.2.6** How did the one year interval get determined? Many trees requiring this level of initial inspection may not warrant another inspection for 2-5 years. The factors that determine the need for *more* frequent inspections could also indicate that *less* frequent inspections are required. I think this annual requirement in the standard may be too specific where a lot of other areas are not specific enough. Some sample language: "the most appropriate inspection cycle should be considered for the particular tree, conditions and targets present, and tree owners stated comfort of risk."
- 93.4.3.2.7** "**Where required**, monitoring and"
- 93.4.3.3.2** Does this have to relate to a target? For example, what if the goal of the inspection at this level is to determine the need for supplemental support to keep a tree or its parts standing up? Target is not part of the scope of work or the objective. Rather the objective is to retain the tree even if there are no targets. So RA does not necessarily need to relate to a target.
- 93.4.3.3.3 (Increment boring)** is this an assessment tool for risk? This is a forester's tool to determine increment! Damage versus useful information gained should be considered here. To get really useful information about risk , the number of holes and associated damage with this tool is unacceptable. Should be dropped here. Not applicable in a 2010/11 national standard. Increment borer is for special assignments and the optics here are that it is a good tool for risk assessment...it is not... period!

93.4.3.3.4 This is another biggy! What are normal work practices????? In my world minimal invasiveness is the driving factor...not in lots of others....the level of acceptable damage versus useful information gained should be carefully considered and more explicitly defined. Maybe the wording should be: "investigative practices that result in more damage than information gained shall be avoided"?? The whole issue here is that when people drill they need to be able to assess the results of their drilling. Currently most people still think that simple formulae can be applied to test their results and give some idea about risk. These simple formulaic approaches have been soundly shown to be of very limited use. They are based on cylinders etc...SEE recent articles by Jerry Bond in Arborist News and Gruber articles in Arboricultural Journal. These simple drilling methods give limited information and are of limited use.

93.6.2 **Absolutely no oral reports** at this level

93.6.2.1 Safety engineers require information on the anticipated forces acting on a structure, material properties of the structure and geometry of the load bearing surfaces in order to provide a safety assessment of a structure. How is this basic structural engineering concept (the triangle of statics) addressed with the methods that have been suggested in the list of advanced assessment tools at 93.4.3.3.3?. Many of those methods only provided parts of this required information but do not provide sufficient information that can be assessed to provide a safety assessment or "tree risk evaluation" as required here. What direction does the standard now provide on the synthesis of information gathered by any of the various methods to end up with a tree risk evaluation.

93.6.3 "Where required, monitoring and"

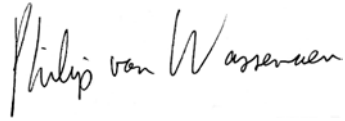
B-2 **(2 Increment borer)** same as above,...strike this

(9 Stem and branch strength loss/decay formula) I thought that it was very clear that formulaic assessments of strength loss are a weak tool...this was a loud point on both day 1 and day 2 of the Tree Risk Summit in Charlotte in early 2009. This method should no longer be enshrined in an ANSI standard.

(9 Root loss assessment) Not if we have use the current research that Tom Smiley uses to apply his root drilling /stability testing methodologies. How will this be defined. When will we see that before you finalize this standard and include this?

I appreciate the chance to submit these comments and look forward to responses from the committee. I will be happy to discuss these comments in more detail if that was desired. Time constraints have limited my chance to expand here.

Respectfully submitted by:

A handwritten signature in black ink that reads "Philip van Wassenauer". The signature is written in a cursive style with a large initial 'P'.

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