



# quantified tree risk assessment

Summer 2008

Newsletter Australia

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"Regardless of what tree risk assessment method you favour, the QTRA training will open your eyes to aspects of risk assessment that you probably have not considered. The QTRA training puts the whole idea of tree risk assessment into perspective."

Dean Simonsen, Director / Consultant Arborist, Treelogic, Victoria, Australia

"The two days spent with Mike Ellison and David Evans in the QTRA seminar and VTA workshop proved to be both challenging and rewarding. Challenging because QTRA requires the practitioner to move away from the conventional approach of looking at tree defects first; rewarding because it provided me with an opportunity to learn from Mike's consummate skills and experience in "listening" to as well as seeing what trees have to tell us. The seminars have helped to broaden my perspective on risk assessment and I would recommend them to any arborists wanting to expand their current understanding of trees."

Garry Clubley, Consulting Arborist, Sydney, Australia

For more testimonials please see below

## Training Workshops in Australia

We are hosting workshops in Melbourne and Adelaide between 28 August and 6 September 2008 including QTRA training, A Practitioners Guide to Visual Tree Assessment and a low cost update workshop for existing QTRA users. See our calendar below and visit our website at [www.qtra.info](http://www.qtra.info) for further information on the content of our workshops.

## Collective Experience

In our last newsletter, we talked about seeking to simplify the tree risk management process and we continue to promote the use of Quantified Tree Risk Assessment (QTRA) at a strategic level, in desk-top studies and in the 'Drive-by' and 'Walkover' surveys. These applications of QTRA enable effective allocation of resources to the areas of most significant risk, rather than producing exhaustive tree inventories, which are not only time consuming and often unnecessary, but can also result in the prescription of costly and frequently excessive management.

We would be interested to hear from QTRA users and the wider industry to learn how you are informing the management of tree safety at a strategic level and whether or not your organizations are accepting of the low level inputs and outputs of the drive-by (windshield) and other preliminary tree safety assessments.

## Newsworthy Articles

If you have a topic that you think would be of interest to others who are managing tree safety, why not send an outline to us with a view to an article in a future newsletter.

## Goode v City of Burnside (2007) SAERDC4 (14 February 2007)

A QTRA user who was concerned about the implications of this judgment has asked if we could make it available for public download on our website, which we have done and it can now be found on the downloads section of the website. Additionally, the following is an extract from a paper presented to the 2007 TreeNet annual symposium and seeks to illustrate the misinterpretation of QTRA that took place in this hearing.

In the Australian case of Goode v City of Burnside [2007], the court considered an appeal against the Council's decision to refuse permission for the removal of two River Red Gum trees (*Eucalyptus camaldulensis* sub sp. *camaldulensis*). Two issues were considered. 1) The risk from failure of the trees, or part thereof, 2) damage to the tree owner's dwelling from root activity. The Judgment of Commissioner Hodgson makes various references to QTRA and its application by the Council's arboriculturist Mr. Lodge.



Learn about becoming a QTRA Licensed User  
Visit [www.qtra.info](http://www.qtra.info)



Learn more about A Practitioner's Guide to Visual Tree Assessment by visiting [www.qtra.info](http://www.qtra.info)



## QTRA Licensed User Training

- 27 Aug Melbourne, Aus
- 03 Sept Adelaide, Aus
- 24 Sept Cardiff, UK
- 01 Oct Guildford, UK
- 07 Oct Derbyshire, UK
- 15 Oct Carlisle, UK

There are two important issues relating to QTRA that are raised in the judgement and there appears to be misunderstanding by the Commissioner of both the inputs and outputs of the QTRA method. Firstly, the Commissioner, at paragraph 18 of the judgment, states "In response to questions from the Court, Mr Lodge acknowledged that there was a fair measure of subjectivity entailed in the assignment of scores to the three criteria under this method (Matheny and Clark 1994). That being the case, I have little confidence in the rating arrived at as an accurate reflection of the risk associated with the subject trees." At paragraph 25, the Commissioner says "It seems to me that the Ellison methodology suffers from the same defect as the Hazard Rating system, namely, that it requires a fair measure of subjectivity in determining the probability of failure and the size of branch most likely to fail, these in turn having a significant effect on impact potential". The Commissioner proceeds at paragraph 27 to suggest, without any particular qualification, that he finds the evidence of Mr. Nicolle, expert for the Appellant, more persuasive.

It is apparent from the Commissioner's concerns over the subjective judgement required in the assessment of tree-failure risk, that he does not fully understand the underlying concepts. In the context of the Commissioner's comments on this matter, the term 'subjective' is broadly synonymous with 'judgement' or 'a person's views' (Concise Oxford English Dictionary 2007). It is not and has never been claimed that QTRA is wholly objective and it is clear that a risk assessment cannot be so. As with any method of assessing tree safety, the judgement of the assessor based upon his knowledge and experience is required whether the risk assessment is an overview of a large tree population or a detailed assessment of an individual tree and its situation. The evidence of Mr Nicolle on the matter of potential for branch failure was no less subjective than that of Mr Lodge who had in fact limited the subjective input to his assessment by applying the structure of the QTRA method.

Secondly, the Commissioner states at paragraph 24 of the judgment "Mr Nicolle's evidence was that the limbs most likely to fail in Tree 1 were 300mm or more in diameter. If that diameter were substituted for the 100mm diameter used in Mr Lodge's calculation of risk of harm, with no other change, the risk would, on my calculations, become 1/592, clearly unacceptable against the criteria underlying Mr Lodge's calculations. Were the probability of failure reduced to a level consistent with Mr Lodge's survey of failure in this species, the risk of harm, based on the Ellison methodology, would be, on my calculations, 1/5,920, again greater than the posited acceptable level of risk of 1/10,000". What the Commissioner did not consider is that large branches are inherently more stable than small branches and the 300mm diameter branch exhibiting no signs of significant defect would have a far lower likelihood of failure than the 100mm diameter branch and that this reduction in the 'Probability of Failure' component of the QTRA would reduce the risk of harm in both cases to below the proposed acceptable threshold.

Thirdly, At paragraph 21, the Commissioner cites the QTRA journal paper thus. "Having read that paper and carefully considered Mr Lodge's evidence, I have significant reservations about the utility of the Quantified Tree Risk Assessment System in providing a reliable measure of the risk represented by a particular tree or trees. The precise nature of the way in which "Risk of Harm" is expressed suggests a level of accuracy and reliability not borne out by a close examination of the inputs to the calculation of that risk." Here the Commissioner makes a reasoned observation and indeed is correct in that expressing the QTRA 'Risk of Harm' output to as many as four significant figures QTRA outputs infer a level of precision that does not exist. This is not a problem with the utility of the QTRA method, because inputs can involve precision, but with the way in which outputs are expressed. The QTRA system benefits from considerable input and feedback from licensed users through an internet discussion forum on which the topic of precision has been discussed. At the next revision the significant figures used in QTRA outputs will be reduced.

Users of the Quantified Tree Risk Assessment system are trained in application of the system and should possess the skills to apply the method to the assessment of tree-failure risk. Providing evidence on the underlying principles of QTRA requires a greater level of understanding and currently few people have that in depth understanding of the subject. For the future, Quantified Tree Risk Assessment Limited will provide a review service and will compile a register of individuals who have attained sufficient understanding of the system to provide confidential review

04 Nov Dublin, Eire  
5 Nov Antrim, UK

[A Practitioner's Guide to Visual Tree Assessment](#)

2 Sept Adelaide, Aus  
30 Sept Guildford, UK  
03 Nov Dublin, Eire

QTRA User Update (Intermediate)

28 Aug Melbourne, Aus  
06 Sept Adelaide, Aus



and guidance to other users.

## Testimonials

"The QTRA methodology provides our company, it's clients and the arboricultural industry as a whole with a benchmark standard for tree risk management."

Dave Robinson (Manager), Anderson Tree Care Ltd., Chesterfield, UK

"Just as elsewhere in the world here in Queensland the most common single request one receives as an Arborist is to assess the safety of a tree, in other words "how safe is my tree?"; Despite the many long and often detailed explanations as to the nature of all living organisms to fail at some point under certain conditions, to the non Arborist the process of risk assessment has often appeared to be either a black art, or worse smoke and mirrors. For myself and the clients I assist QTRA delivers a transparent, understandable and importantly defensible methodology for the calculation of the risk of harm to persons or property.

The recent update workshop in Adelaide SA was a fantastic opportunity to refresh in our minds the basic principles of the QTRA method, as well as the latest developments since our first training sessions back in November 2006. Because it is a move away from the defect led assessments that so many of us have "grown up" with, our ingrained habits of concentrating on the tree first and foremost prove hard to shake off.

What I found truly invaluable was the chance to apply QTRA to a number of example trees then share with other arborists both the methodology and the results; discussing the differences between our assessments and remarking on the similarities in the final result measured against the limit of acceptable risk.

In a really important but unexpected way the principles of QTRA have imbued all of my tree reports and management plans with the realistic perspective of the entire urban tree population, not merely the extreme examples that tend to stand out in our minds, and dominate the perception of the general public. I have found it to be a powerful complimentary tool in the rational long term management of trees and tree risk.

Sean Freeman, Senior Consulting Arborist , Queensland, Australia

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