

GOODE v CITY OF BURNSIDE [2007]

In the 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.

There are two important issues relating to QTRA that are raised in the judgement and there appears to be misunderstanding of both the inputs and outputs of the QTRA method by the Commissioner. 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 (ISA 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 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 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 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 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 and guidance to other users.