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TREE CONSULTANCY

Tree risk management for duty holders and arborists; an alternative approach

(Article 3/3 for Arboriculture Australia's The Bark – June 2013)
This article is adapted from an original article published in the Arb Magazine (www.trees.org.uk).

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When a tree failure results in harm and it progresses to formal proceedings, the legal focus falls on whether an appropriate standard of care was met, firstly by the duty holder, and secondly by the inspecting arborist. In this final article of the series offering a UK perspective on tree consultancy, Jeremy Barrell (www.barrelltreecare.co.uk) cuts through the confusion and complication that dominates modern tree risk management, to reveal a few surprising and simpler alternatives. From his unique perspective as an expert witness in tree failure cases, he believes that the time has come to step back and take a reality check on how we deal with tree safety, setting it into a much wider legal and social context. This fresh look at old problems provides an opportunity to simplify the decision-making process, an evolution that both duty holders and arborists have needed for some time.

STRATEGIC TREE RISK MANAGEMENT FROM THE DUTY HOLDERS' PERSPECTIVE

Setting tree management within the context of a wider legal framework

Although arborists may like to think that they make the decisions about what is responsible tree management, in practice, that is not strictly the case. They may know how trees grow, and the minute detail of tree defects and failure, but it is the courts that decide who is to blame when a tree failure causes harm. Arboricultural detail is obviously important, and experts should rightly investigate and explore how trees work, and be able to explain why failures happen. However, in court, that detail yields to the fundamental principles governing the application of the law. That legal decision-making process is essential knowledge for arborists aspiring to provide reliable and useful advice on tree safety.

An important step in understanding the legal context is to know the meaning of common terms used by lawyers dealing with tree failure cases. In such cases, a particularly relevant part of the legal process revolves around the elements that must be established in court to prove negligence, i.e. 1. that a duty of care exists; 2. the duty was breached; 3. the breach caused harm; and 4. the harm resulted in damage. Although their precise form and detailed legal definitions may vary among countries, associated terms frequently encountered in England include:

- **Duty holder:** The entity, which can be an individual or an organisation, that is legally responsible for tree safety and management.
- **Duty of care:** A legal obligation imposed on duty holders to take care to avoid causing harm to others through the management of their trees.
- **Standard of care:** The degree of prudence and caution required of an individual who is under a duty of care.
- **Liability:** Where responsibility lies when a tree causes harm, i.e. who is to blame and who pays!
- **Negligence:** A failure to exercise the level of care in managing trees that a reasonably prudent person would exercise in similar circumstances.
- **Proportionality:** The relationship between the effort or cost to achieve an outcome and the scale of the benefits that arise from that outcome. This is a balancing process, with the desirable objective being to avoid severe extremes between the cost of what is done and the benefit that action achieves. In very general terms, if the cost of dealing with a tree condition is grossly disproportionate to the value of the

benefits that work delivers, then it may be reasonable not to do it.

- **"Reasonable person":** A "reasonable person" is a tool for explaining the law; it is very much a loose concept and does not have the benefit of any universally accepted technical definition. However, it is still of great importance in assisting the legal decision-making process, and what a "reasonable person" could be expected to do is highly relevant to judgments about tree management.
- **Practicability:** In many situations, there is a range of actions available to address safety issues, but often the extremes may not be sensible, practically achievable, or reasonable in the circumstances. There is an expectation by the courts that, for actions to be appropriate, they need to be reasonably practicable. The difficulty for tree managers, however, is that there is no simple recipe for meeting this requirement. Instead, it is a matter of judgment that will be analysed in detail by the courts.

How do duty holders decide how much tree management is enough?

On the one hand, all responsible duty holders want to ensure that if harm arises from a tree failure, they can successfully refute allegations of negligence and not be found liable for the consequences. On the other hand, all management activities cost money and no one wants to spend more than necessary. So where does the balance lie? This is the crux of what duty holders want to know, and it leads to a host of subsidiary questions that advising arborists are frequently asked to answer:

- How often should I have my trees inspected?
- Do my trees need inspecting at all?
- Can I inspect my own trees?
- What qualifications should an inspector have?
- Is a visual check enough or do I need to have expensive investigations carried out?

Since these are precisely the questions that the courts will ask if a tree failure results in harm, the answers are very important. The conundrum for arborists and duty holders, is that very little definitive guidance exists; one finds instead a complex web of apparent inconsistencies and contradictions!

Of course, the safest option is to remove all suspect trees, but that is likely to be expensive in terms of both costs incurred and benefits lost. The challenge for arborists and duty holders alike is to find a way to make sense of the complexity, to drill down through all the confusion and distil out an approach that reasonably balances safety, cost and benefits. A useful starting point is to identify significant factors that can influence the standard of the duty of care and attempt to weight them in an organised way. Such an approach is described in a paper called *Balancing tree benefits against tree security; the duty holder's dilemma*, published in the UK *Arboricultural Journal* (www.tandfonline.com/doi/abs/10.1080/03071375.2012.691674), recognizing that important considerations include, *inter alia*:

- civil and criminal legal principles and case law setting out the precedents that will be applied to tree incidents;
- the resources available to the duty holder;
- published guidance and technical references;
- land occupancy and the potential for harm to people and property; and
- the benefits that trees provide.

In practical terms, the actual requirement of what to do to meet a duty of care is elusive detail, with no final answer until a case gets to court. It is an understandable aspiration

for duty holders to seek the security of knowing they have done as much as can be reasonably expected, but there is no clear path to that position of safety. Instead, there are multiple interacting issues that have to be considered and weighed, which in turn inform a range of management options, with no guarantee of protection if an accident occurs! The objective is a position of security, but a sustainable, proportionate, sensible and defensible route to that end has proved very difficult to map.

A framework for proactive tree risk management

Each of the issues listed above can have a significant impact on determining the standard of the duty of care, but more detailed explanations are beyond the scope of this article. However, those headings do set out the beginnings of a process to help duty holders work out what to do. Figure 1 assimilates a detailed consideration of all that information into a decision-making framework to assist in this task.

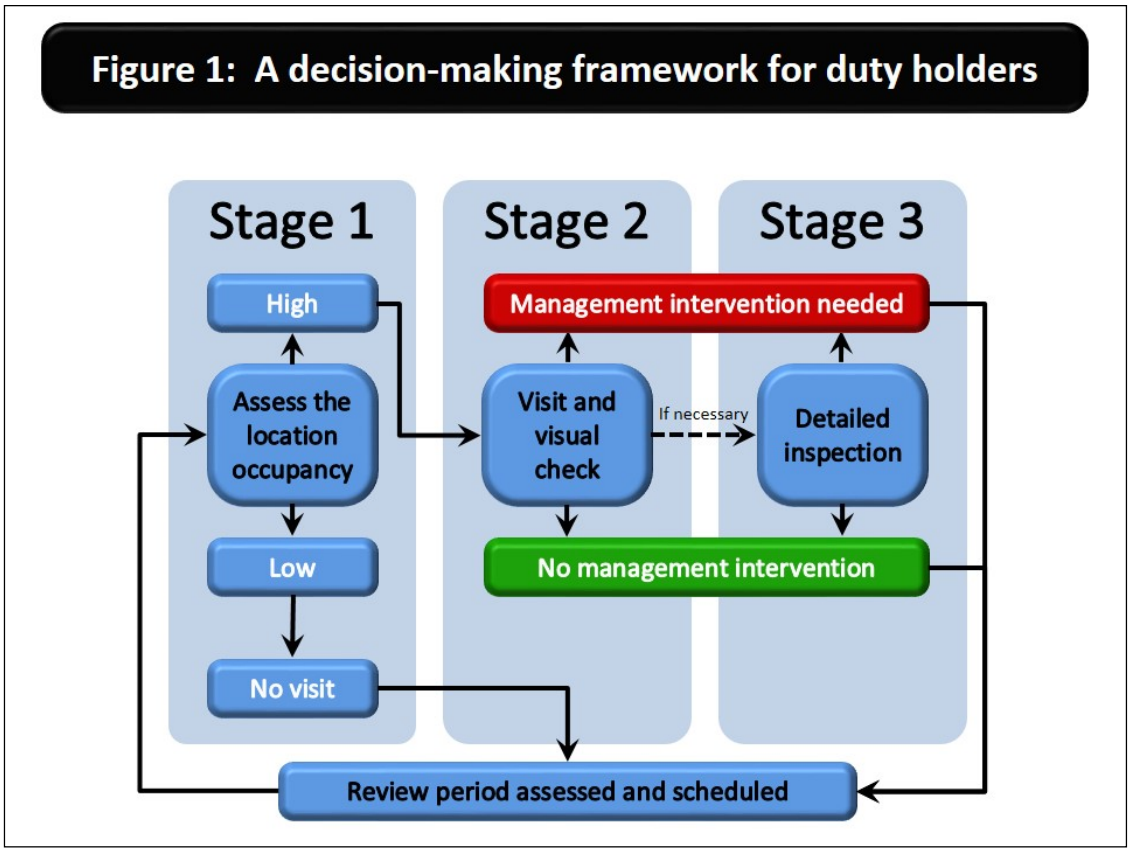

Figure 1: A decision-making framework for duty holders.

Its three main stages are summarised below:

Stage 1: Assess the potential for harm that arises purely because of the occupancy of the location by people and property. Occupancy is a measure of the level of access and has nothing to do with trees at this stage. Note that this is not the same as assessing the level of risk, which by definition (level of risk = likelihood of harm x consequences) requires a consideration of the tree. If there is no significant potential for harm because of low occupancy, then there is no need to visit to even check whether trees are present or not. This assessment does not require any tree

expertise and can be done by a layman with knowledge of the land. It is likely that, as a minimum, all duty holders would be expected to undertake this process to meet their duty of care.

Stage 2: If the occupancy is such that there is a significant potential for harm, then the location will need to be visited and any trees present will need to be visually checked. If the quick visual check does not identify any obvious problems, then no further action will be necessary in that management cycle. If problems are identified, then intervention works (which could include tree work or changes to restrict occupancy around the tree) could be specified at that point.

Stage 3: If necessary, a more detailed inspection could also be carried out. Its need and scope would be dictated by the findings of the visual check, but it is likely that this would require specialist knowledge and that the inspector should be formally trained for the task.

If management work is required, it should be undertaken within a reasonable time period to discharge the current responsibilities. Indeed, it is likely that failure to carry out the recommended work soon after notification would leave the duty holder exposed in the event of any legal proceedings. Furthermore, the duty of care is not indefinitely discharged through one round of management activity. As time passes, the situation will need to be revisited, i.e. all effective management regimes must have a reinspection provision to complete the cycle.

In summary, the difficulty for duty holders and advisors alike is that the only way to be sure that enough has been done is through a decision from the courts. In the absence of such certainty, duty holders who have adopted an organised approach and are able to demonstrate that what was done was reasonable, practicable, balanced, proportionate and sensible are likely to have gone some considerable way to meeting their duty of care.

THE INSPECTING ARBORISTS' PERSPECTIVE ON MANAGING TREE RISK

A common source of arborist anxiety

At some stage in their careers, most arborists will make decisions related to tree safety. With this comes an inevitable anxiety that, despite their best efforts to get it right, something goes wrong and harm arises to people or property. In the UK, recent research (www.ntsg.org.uk) has revealed that an average of six people a year are killed by tree failures, but that a further 55 may suffer serious injuries. An obvious consequence is that annually about 60 individuals and their families have to deal with the trauma of death or serious injury caused by trees. Although the precise figure is unknown, my own caseload confirms that a significant proportion of incidents progress to civil legal actions, with the sole purpose of attributing blame and securing financial redress for the harm. If the failed tree was under any sort of management programme, then first in line for that blame is the inspecting arborist, which has the obvious potential to cause anxiety. In addition to the moral burden that their decisions may have harmed other people, there is the worry of financial consequences that can run into millions and the spectre of an unfavourable decision by the courts cutting short even the most promising of careers! It is no wonder that some arborists feel concerned, and that this intense psychological pressure encourages a '*better safe than sorry*' culture, contributing to unnecessary tree removals.

UK evolution of tree risk management

The presence of trees offers many benefits, and yet they can cause significant harm if they fail. It is the role of inspecting arborists to identify potential failures in advance of them happening and specify measures to reduce the threat of harm. Too much caution

results in trees being lost prematurely through removal, and their full potential to deliver benefits is compromised; too little and the potential for harm escalates upwards towards becoming intolerable. The challenge for duty holders and advising arborists, is to find a sensible and practical balance between maximizing tree benefits whilst minimizing tree threats. Quite rightly, reducing the harm that trees cause has been a primary driver of arboricultural thinking, research and practical development in recent decades.

In practical terms, technological advances in non-invasive equipment for investigating internal structural integrity have been very useful. Techniques using thermal imaging, ultrasound and microdrills, add another layer of detail to supplement visual tree assessment. However, with that benefit comes extra cost because the equipment is comparatively expensive, and training and experience are essential to reliably interpret the complex information.

In tandem with these practical developments, the theory of tree risk management has also moved on at pace, taking a lead from trends in the more industrialized sectors. This has resulted in a focus on increasingly complex ways of assessing risk, with methods emerging of a qualitative nature (using terms such as high, medium and low risk) and a quantitative nature (using numbers to quantify the risk). However, these methods originate from the uniform conditions found in factories where repetitive and identical processes prevail. Unfortunately, these do not seem to have transferred very well to the highly individual world of trees, where little is standard and extreme variation is normal. This variability makes it effectively impossible to reliably and consistently assess the level of risk using these conventional approaches, which can result in over-cautious management specifications.

Hand in hand with the availability of modern technical equipment and advanced methodologies comes pressure to use it. For most arborists, despite that pressure being subtle, it nonetheless presents a very real anxiety; if they do not use the most current, complex and expensive methods available, are they going to be vulnerable to criticism in the event of a tree failure ending up in court? Indeed, many of these options are now so complicated that they demand highly specialized skills, which realistically puts them out of reach as tools for the majority of the arborists involved in the daily routine of tree management!

An alternative perspective

Although there can be little doubt that arboriculture is developing quickly and positively, the detail of assessing the risk from trees, set within the broader risk management context, remains an area where there may still be scope for more useful evolution. Indeed, the increasing complexity continues to pose a dilemma for many arborists and approaching the issues from a legal perspective may provide a meaningful alternative for those who feel uncomfortable with the current situation.

When a tree fails and causes harm, it is the courts that decide where liability lies if the parties cannot settle it between themselves. It follows that what is important to the courts and how they come to decisions is likely to be of fundamental importance in the process of minimizing the chances of being found liable. In the broadest sense, the courts are very interested in what is reasonable in the circumstances of each case, and this has a significant bearing on the expectations of who should have done what. Courts are also concerned about whether the harm was foreseeable and what was done about it, especially in the context of the available resources, i.e. was the management response proportionate. In tree cases, those principles invariably direct attention to whether the tree failure was foreseeable and what was

done about it. If the management response is deemed reasonable and proportionate, then the event becomes an unfortunate accident, with the converse resulting in liability being assigned primarily to the duty holder, and possibly to the advising arborist.

In contrast to the courts' focus on the foreseeability of failure, modern tree management has developed with a heavy emphasis on attempting to assess the '*level of risk*' at a very early stage in the tree management process. However, that approach is fraught with difficulty because trees are so variable and the rather abstract idea of '*level of risk*' is almost impossible to agree, even between trained assessors. In effect, reliably assessing the '*level of risk*' is not possible, and yet there seems to be a widespread determination to continue trying to do it! What is even more confounding is that this is not a primary consideration by the courts and so, despite all the efforts to do it, it is not necessary! In short, this preoccupation seems to have distracted attention from the real issues, which are assessing the foreseeability of tree failure and what was done about the threat of harm that flows from that.

When a tree failure incident is scrutinized by lawyers at the start of legal proceedings, and finally by the courts (if the case progresses that far without settlement), whether an inspection was carried out and how it was conducted is always a focus of attention. Invariably, the inspection regime is deconstructed into its constituent parts – the frequency of inspection, the competence of the inspector and the nature of the inspection – and each is analyzed in minute detail. The ultimate purpose of all this dissection is to establish whether the failure was foreseeable and whether the management response was reasonable. This approach assists the lawyers and the courts in understanding the detail of the case so that overarching legal principles can be applied to form a judgment on who was right and who was wrong.

In this broad legal context, the question of whether a failure was foreseeable, which allows a '*yes*' or '*no*' answer, may be more attractive to the courts than the question of what is the likelihood of failure, which can only loosely place an answer on a conceptual scale. Indeed, there is some obvious advantage to a definitive '*yes*' or '*no*' answer because it allows the analysis to be compartmentalized into discrete components that can be individually processed before moving onto the next. It is only if a failure is foreseeable that a further and separate consideration of the consequences is necessary to arrive at a management action. Such a stepwise approach is easy to visualize and understand, which is a good reason why the courts may be likely to favour such an analysis. In contrast, an obvious disadvantage with the probabilistic approach is that likelihood of failure has to be combined with an assessment of the consequences to arrive at a level of risk, which then has to be translated into a management action. This convoluted sequence of considerations is difficult to separate out into meaningful and standalone individual components, and even harder to visualise. My experience is that lawyers and the courts are attracted to stepwise analyses that are easy to understand, and there may be some merit in carefully considering this type of approach.

The sleep-tight protocol

If it is accepted that compartmentalizing the tree risk assessment process will assist the courts in applying the law, then arborists who have considered what the courts are looking for, and are able to explain what they did in those terms, will obviously be well-placed to refute allegations of negligence. If it is also accepted that establishing whether a failure is foreseeable is a helpful starting point, then that process needs to be analysed and separated out into its constituent parts. In practice, those parts turn out to be a range of factors that can influence whether a failure will occur (Figure 2, panel 2). The role of the

inspecting arborist is to intellectually weigh and balance each of these factors in a subjective way to arrive at a carefully considered conclusion (Figure 2, panel 3). It is understanding and adopting this process that offers up the prospect of anxiety-free decision-making for the inspecting arborist.

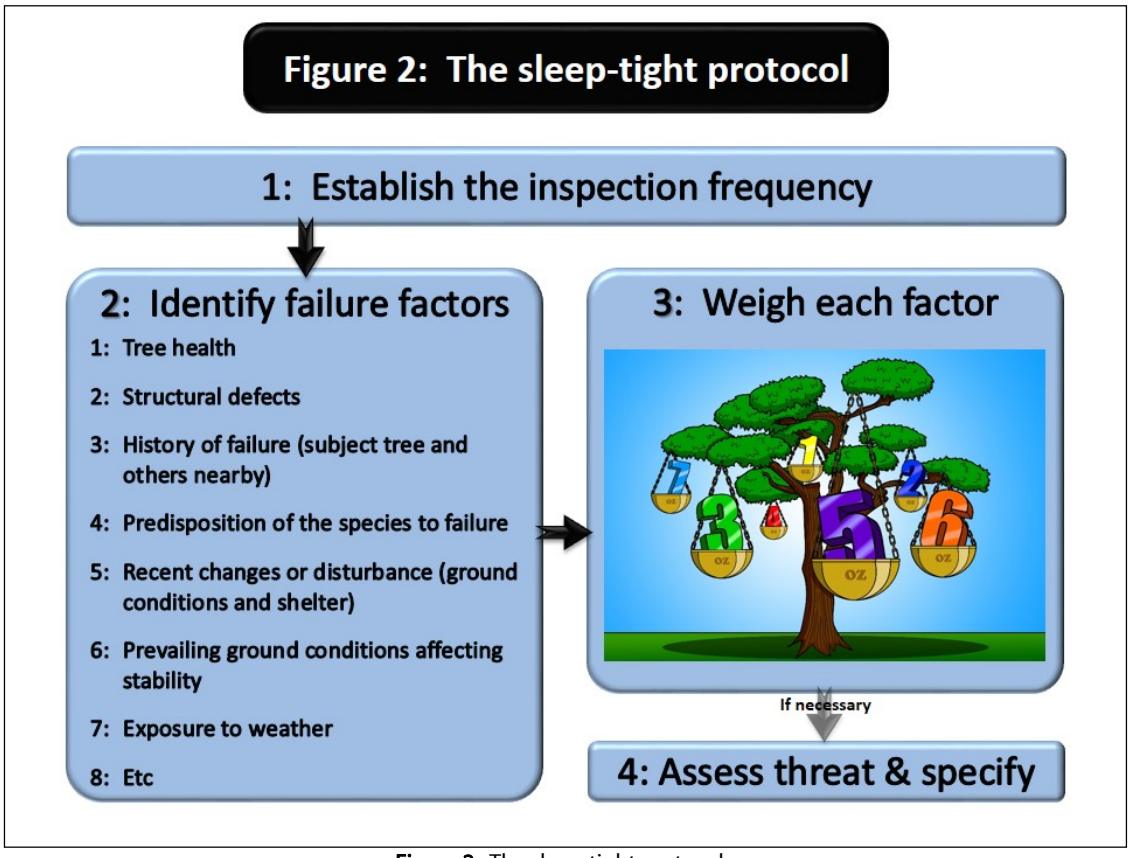

Figure 2: The sleep-tight protocol.

More specifically:

Stage 1 – Establish the inspection frequency: The unavoidable starting point for assessing if a failure is foreseeable is to establish the inspection period, i.e. how long it will be before the tree is inspected again. If an inspection period is not known or has not been specified, then the inspector has to allocate one and record it. This is because the assessment of foreseeability of failure is a meaningless concept if set within an open-ended timescale; all trees will fail given enough time.

Stage 2 – Identify and list relevant factors that could contribute to a failure: With a fixed timescale in mind, the inspector can then review all the factors that can influence whether a failure will occur. These are likely to include, but are not strictly limited to:

- Tree health
- Structural defects
- History of failure (subject tree and others nearby)
- Predisposition of the species to failure
- Recent nearby changes or disturbance (ground conditions and shelter)

- Prevailing ground conditions affecting stability
- Exposure to weather

Stage 3 – Intellectually weigh and balance each factor to decide if a failure is anticipated within the inspection period: Inspectors should separately consider all the relevant factors that could affect stability and make a subjective assessment of how important each is. They should then assign appropriate weight to each as a means of working towards a final balancing exercise in their minds, which is the basis for deciding if a failure is foreseeable. This must be a simple '*yes*' or '*no*' answer; someone has to make a decision and it is the arborist who is best placed to make this judgment.

Stage 4 – If necessary, assess the threat of harm and specify intervention works: If a failure is anticipated within the inspection period, then a further and separate consideration of the level of nearby occupancy, i.e. who or what could be harmed, will inform the specification for management intervention, which marks the end of the inspection process for the arborist. If, when and how those works are carried out are then matters for the duty holder to decide on, and are likely to include a consideration of tree benefits and available resources.

The reality of much routine risk assessment is that many trees have to be processed very quickly and so a method that is fast, minimizes paperwork and is easy to explain to lay people, is an aspirational ideal for arborists. The sleep-tight protocol offers all of these benefits within a framework that is specifically designed to assist the courts in analyzing the detail of the management process where harm arises from a tree failure. Arborists who understand this process, observe it and can explain the reasoning when challenged, should sleep easier when the storms come, because the courts are unlikely to expect any more than this.

Jeremy Barrell has worked with trees all his life, building up a modest contracting business in the early 1980s and 1990s before concentrating on full-time consultancy in 1995. From those humble beginnings, Barrell Tree Consultancy (www.barrelltreecare.co.uk) now has six consultants advising on planning and legal issues throughout the UK.