

NORTH LINCOLNSHIRE COUNCIL

**CABINET MEMBER FOR HIGHWAYS
AND NEIGHBOURHOODS**

ASSESSMENT OF TREE RISK

1. OBJECT AND KEY POINTS IN THIS REPORT

- 1.1 To approve the adoption of the Health and Safety Executive's (HSE) threshold of acceptable risk from trees.
- 1.2 The key points in this report are as follows:
 - 1.2.1 Current risk assessment systems emphasise the risk inherent in trees.
 - 1.2.2 For the council to use instead, a particular risk assessment system called Quantified Tree Risk Assessment (QTRA) that takes into account both safety and the amenity value in trees.

2. BACKGROUND INFORMATION

- 2.1 The council is responsible for the management of a large number of trees across a number of services including those in parks, highways, schools and cemeteries.
- 2.2 Trees have a very significant beneficial effect on our quality of life. However, trees growing on publicly accessible land or close to private property could also present a potential risk. As landowners, liability may rest with the council for any damage or injury caused and it has a duty of care to prevent foreseeable harm.
- 2.3 Fear of litigation has however led many landowners to remove trees in the name of 'health and safety'. This precautionary approach has led to the unnecessary removal of trees, given a more reasoned assessment of the balance between risk and amenity.
- 2.4 The National Tree Safety Group (NTSG) was formed in 2007 to address this imbalance and develop a nationally recognised approach to tree safety management. It has now provided guidance that is proportionate to the actual risks posed by trees. This is based on the following five key principles:

- Trees provide a wide range of benefits to society;
 - They are living organisms and naturally lose branches and fall;
 - The risk to human safety is extremely low;
 - Tree owners have a legal duty of care;
 - Tree owners should take a balanced and proportionate approach to tree safety management.
- 2.5 The NTSG provides guidance on proportionality and reasonableness for a spectrum of landownership from small households to large public and private bodies and their varying and limited resources.
- 2.6 For tree safety management the guidance highlights four essential aspects:
- Zoning tree stock in relation to people or property;
 - Inspection to assess obvious risk related tree defects;
 - Identification and prioritisation of safety work according to level of risk;
 - Carrying out essential works.
- 2.7 Several systems for assessing tree risk are available which meet with the NTSG guidance. Currently however, only QTRA estimates the probability of significant harm occurring and allows prioritising according to available resources.
- 2.8 The QTRA system is a development of an existing system used by the council's Environment Team but there is no agreed standard for assessment across the council. The council's tree policy compendium requires that where trees are to be removed, a risk assessment is first made to inform any consideration of removal.
- 2.9 QTRA differs from this existing system in that it is not predictive in an absolute sense and does not seek to provide an absolute safety threshold. Instead it provides a statistical assessment of tree failure risk based upon established and accepted risk management principles.
- 2.10 Values are derived from the assessment of three components:
- Target (what is likely to be found within falling distance);
 - Impact potential (the size of the failing part);
 - Probability of failure
- These are combined to calculate the probability of significant harm occurring.
- 2.11 In use, the system assesses and quantifies the targets upon which trees could fail, thus enabling tree managers to determine whether or not and to what degree of rigour a survey or inspection of the trees is required. Where necessary, the tree or branch is then considered in terms of both impact potential (size) and probability of failure.

- 2.12 The system therefore moves the management of tree safety away from labelling trees as either 'safe' or 'unsafe', thereby requiring definitive statements of tree safety from tree managers. Instead, QTRA quantifies the risk of significant harm from tree failure in a way that enables managers to balance safety with tree value and operate to a predetermined limit of reasonable or acceptable risk.
- 2.13 Reasonable or acceptable risk is based upon an understanding of tree failure in general. When evaluating tree failure hazards we must consider two types of risk. The risk imposed on individuals, as with the neighbour of a tree owner, and the risk accepted by individuals in return for a benefit, as with the visitor to woodland.
- 2.14 Considering this, the predetermined limit of reasonable or acceptable risk was set at 1/10000 by the British Medical Association (BMA) who reported that "*few people would commit their own resources to reduce an annual risk of death that was already as low as 1/10000.*" The Health and Safety Executive (HSE) also reported that "*for members of the public who have a risk imposed on them 'in the wider interest' they would set this limit at 1/10000 per annum.*"
- 2.15 It would therefore seem reasonable to accept this limit of reasonable or acceptable risk when carrying out the assessment of risk from trees.
- 2.16 An additional benefit of QTRA is that it is both a licensed and evolving system. This ensures inspectors are trained in its application to a unified standard, apply it in a consistent way, and that the system develops through ongoing research and refinement.

3. **OPTIONS FOR CONSIDERATION**

- 3.1 **Option 1** - The council adopts the QTRA method for assessing the risk from trees posed to persons or property.
- 3.2 **Option 2** - The council considers a different method of assessing the risk would be more appropriate.
- 3.3 **Option 3** - The council considers the threshold of 1/10000 as a reasonable or acceptable risk threshold when carrying out the assessment of risk from trees.
- 3.4 **Option 4** - The council considers whether an acceptable threshold should be higher or lower than 1/10000.

4. **ANALYSIS OF OPTIONS**

- 4.1 **Option 1** - Using the QTRA system maintains a defensible position at the least possible cost while avoiding undesirable loss of valued trees, and is consistent with a duty of care based on reasonable care, reasonable prediction and reasonable practicability.

- 4.2 **Option 2** – The council could use a different system for tree risk assessment if it felt the QTRA system did not address tree risk assessment in an appropriate way, which this report does not advise. Other systems are generally either not statistically based or are unrealistically predictive about the probability of tree failure.
- 4.3 **Option 3** - The threshold of 1/10000 has been put forward by the HSE and the BMA, both authoritative organisations, as a suitable threshold to maintain the balance between the benefits of risk reduction and the cost of that risk reduction, not only financially but also in terms of lost amenity and other tree related benefits.
- 4.4 **Option 4** - The council could consider a higher or lower threshold based upon what it considered a limit of reasonable or acceptable risk.

5. RESOURCE IMPLICATIONS (FINANCIAL, STAFFING, PROPERTY, IT)

5.1 Financial

5.1.1 Any costs that might arise can be met from existing budgets. If the council decides to use the QTRA system, staff with responsibility for management and inspection of trees would need some training and guidance in its application.

5.1.2 QTRA is target led so, rather than carrying out detailed inspections of every tree, resources are saved by only inspecting those trees capable of causing harm.

5.1.3 However, the adoption of QTRA may result in the removal of fewer trees at less cost to the council and therefore, the retention of a greater amenity value in the stock.

5.2 Staffing

5.2.1 There are no staffing implications associated with this report.

5.3 Property

5.3.1 There are no property implications associated with this report.

5.4 IT

5.3.1 There are no IT implications associated with this report.

6. OTHER IMPLICATIONS (STATUTORY, ENVIRONMENTAL, DIVERSITY, SECTION 17 - CRIME AND DISORDER, RISK AND OTHER)

6.1 Risk

6.1.1 Without an appropriate tree risk assessment system it may not be possible to provide an adequate defence in the event of harm resulting from tree failure. It is usually necessary for landowners to demonstrate they have not been negligent and have acted reasonably in the management of trees and they have thus discharged their duty of care.

6.2 There are no other implications associated with this report.

7. OUTCOMES OF CONSULTATION

7.1 Relevant officers in Neighbourhood and Environmental Services (NES) support the proposals set out in this report.

7.3 Risk Team - it is important for the council to follow professional guidance and this report contains a good risk management approach to the assessment of tree risk.

8. RECOMMENDATION

8.1 That the QTRA system is adopted by the council and referred to in the council's policy compendium on trees.

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Background Papers used in the preparation of this report:

- Health and Safety Executive – Reducing risks, protecting people (2001)
- Quantifies Tree Risk Assessment – User manual Version 3 (2010)
- Metheny & Clark - A photographic guide to the evaluation of hazard trees in urban areas (1994)
- Lonsdale - Principles of tree hazard assessment and management (1999)
- NTSG - Bringing Common Sense to Tree Management: Guidance on trees and public safety in the UK for owners, managers and advisers: Consultation (2010)
- British Medical Association - Living with risk (1987)