

Tree Strategy



Good Practice Guide 4 Tree Risk Management

Staffordshire Moorlands District Council

Good Practice Guide 4

Tree Risk Management

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1. Introduction

1.1 Purpose of this Guide

Staffordshire Moorlands District Council is a large tree owner with thousands of trees growing in its parks and open spaces. These trees provide many benefits, including making the landscape more attractive, contributing to wildlife, absorbing pollution, helping us adapt to climate change and even adding value to the price of property.

Trees also pose a risk and whilst it is important that we maximise their benefits we also take precautions to keep within reasonable limits the risk they pose to people and property. The Health and Safety Executive (HSE) concludes that the risk of being struck and killed by a falling tree is 'extremely low' (HSE 2007).

“Each year between 5 and 6 people in the UK are killed when trees fall on them. Thus the risk of being struck and killed by a tree falling is extremely low”

The risk of being struck and killed by a tree growing in a public space is even lower. Up to 3 people are killed each year by trees in public spaces, but as almost the entire population of the UK is exposed, the risk is about one in 20 million.” (HSE, 2007)

This risk therefore represents an extremely small proportion of the background risk that we commonly accept in our everyday lives, and the ongoing removal and general management of trees is probably the most important factor in keeping this figure at such a low level. However, there can be pressure to remove trees because of a perception of risk, which may be much greater than any actual risk a tree poses.

It should be appreciated that we cannot completely remove the risk from trees: to do so would create an unacceptable loss of the many benefits that trees provide.

The removal of trees based on an unfounded perception of risk is not appropriate because it leads to the unnecessary loss of trees and their benefits. Instead, damaged and defective trees will be managed to control the actual risk they pose to people and property whilst fully recognising their value.

Implementing this Tree Risk Management Plan demonstrates that we have considered the risks from trees and have adopted a process that is proportionate to the risk; which evidence is increasingly indicating is relatively low.

2. Approach to Risk Management

2.1 The Council's Legal Duties and Liabilities

Staffordshire Moorlands District Council has a legal 'duty of care' to ensure that users and neighbours of its land are reasonably safe (Occupiers Liability Acts 1957 and 1984). The Council must also ensure that risks to its employees, contractors and visitors are reduced as far as is 'reasonably practicable' (The Health and Safety at Work Act 1974).

Trees are not static objects and they are constantly changing as they grow and vary with the seasons. They can also reach considerable size and can become damaged by the weather or affected by pests and diseases. When trees fail and either fall over or lose branches they have the potential to cause harm where they grow in areas of public access or within falling distance of structures or highways. People and property that might be injured or damaged by trees or branches are referred to within this document using the generic term 'targets'.

The Council must balance this risk with the aesthetic, ecological, environmental and social benefits that trees bring. "Reasonableness" is a key legal concept when considering the risks of trees to the public, and tree owners' obligations. A comprehensive summary of English Law as it relates to trees can be found in Chapter 3 'What the law says' in National Tree Safety Group (2011) Common Sense Risk Management of Trees.

The Council's fundamental responsibility, in taking reasonable care as a reasonable and prudent landowner, is to consider the risks posed by its trees. The level of knowledge and the standard of inspection that must be applied to the inspection of trees are of critical importance, but the courts have not defined the standard of inspection precisely. Generally, the courts appear to indicate that the standard of inspection is proportional to the size of landholding and resources available (in terms of expertise) to the landowner. It is of note that the HSE states that: "for trees in a frequently visited zone, a system for periodic, proactive checks is appropriate" (HSE 2007)

Where harm occurs, liability is a matter for the courts to determine. The question is whether or not the Council has discharged its duty of care, which will be largely dependent upon whether or not the Council has taken a reasonable and proportionate approach to the management of tree safety.

2.2 National Guidance on Tree Risk Management

This Good Practice Guide implements the National Tree Safety Group guidance 'Common Sense Risk Management of Trees', published December 2011.

The National Tree Safety Group (NTSG) was convened in August 2007 to develop a nationally-recognised approach to tree safety management and to provide guidance that is proportionate to the actual risks from trees. The NTSG released its guidance '*Common Sense Risk Management of Trees*' in December 2011 (NTSG, 2011). This is the first national guidance on tree risk management available to tree owners, and followed extensive industry and government consultation.

The NTSG's overall approach is that the evaluation of what is reasonable should be based on a balance between benefits and risks from trees. This position is underpinned by a set of five key principles:

- Trees provide a wide variety of benefits to society
- Trees are living organisms that naturally lose branches or fall
- The overall risk to human safety is extremely low¹
- Tree owners have a legal duty of care
- Tree owners should take a balanced and proportionate approach to tree safety management.

The NTSG's guidance states that tree owners should take a balanced and proportionate approach to tree management that forms the basis of a tree safety strategy which covers three essential aspects:

- Zoning: appreciating tree stock in relation to people or property
- Tree inspection: assessing obvious tree defects
- Managing risk at an acceptable level: identifying, prioritising and undertaking safety work according to level of risk.

The NTSG's guidance requires that areas of land are defined according to levels of use, prioritising the most used areas. High use zones are areas used by many people every day, such as busy roads, other well-used routes, car parks and children's playgrounds, or where property may be affected. Trees in areas of high public use require an inspection regime. Trees in areas with low public use require less frequent inspection. The risk of death or serious injury from trees in

¹ NTSG have identified that the overall estimated risk of death per year from falling or fallen trees and branches in the UK is about 1 in 10 million, whereas the annual risk of death in a road accident is about 1 in 16,800. So far as non-fatal injuries in the UK are concerned, the number of A&E cases attributable to being struck by trees (about 55 a year) is exceedingly small compared with the roughly 2.9 million leisure-related A&E cases per year, such as footballs (262,000) and children's swings (10,900).

infrequently-used areas is so low that it is reasonable that these should receive no formal inspection or visual check. However, owners may need to respond to any reports of problems. If reasonably carried out, the strategy should meet the duty of care required by law. In the event of an accident, documents will provide supporting evidence that reasonable care has been taken.

2.3 Managing Risk at an Acceptable Level

This Good Practice Guide manages the annual risk of death or significant harm from trees within the Health & Safety Executive's 'Tolerability of Risk Framework', by assessing risk and recommending control measures to ensure that risks are tolerable or as low as reasonable possible (ALARP)

People are constantly exposed to, and accept or reject, risks of varying degrees. For example, if society desires the convenience of electric lighting, it must accept that, having implemented control measures such as insulation, there remains a low risk of electrocution; this is an everyday risk taken and accepted by millions of people. The Health and Safety Executive advises that each year between 5 and 6 people in the UK are killed when trees fall on them (HSE, 2007). The HSE concludes that the risk of being struck and killed by a falling tree is extremely low. Around 3 people each year are killed by trees in public spaces. Measured against the entire UK population, the average risk of death is about one in 20 million. The risk of the average tree causing fatality, is about one in 150 million for all trees in Britain.

If absolute safety from tree failure were achievable, the community would almost certainly find the cost, in terms of the loss of trees, unacceptable. In this regard, the NTSG guidance advises that it is reasonable for a tree owner to operate a broad threshold of 'acceptable risk' where tree failure is concerned, that balances the risk from trees on one hand and the benefits they bring on the other. The UK Health and Safety Executive (HSE) suggests, "For members of the public who have a risk imposed on them 'in the wider interest' HSE would set this limit at 1/10,000 per annum" (HSE, 2007).

The HSE have developed the Tolerability of Risk Framework which has been incorporated into the NTSG guidance. Risks above 1/10,000 per annum are generally considered unacceptable when placed on the public, however may be tolerable if the affected parties are aware of the risk and decide to accept it. Risks between 1/10,000 and 1/1,000,000 per annum are tolerable, but consideration should be given to managing them 'as low as reasonably practicable' (ALARP), where it is cost effective to do so.

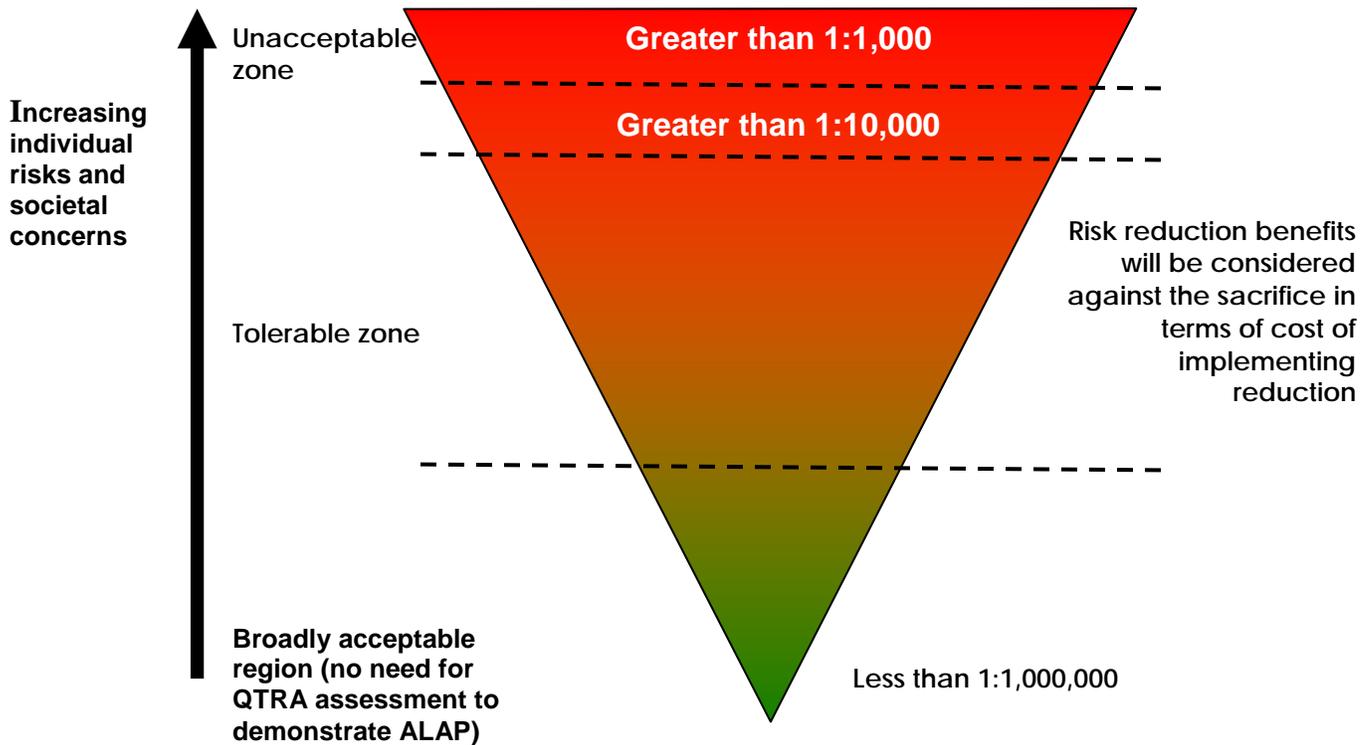


Figure 1. Adapted from the tolerability of Risk Framework (HSE 2001) and the Quantified Tree Risk User Manual Version 5

To put the 1/10,000 probability of significant harm into perspective, Table 1 is reproduced from the British Medical Association Guide "Living with Risk", British Medical Association, (1987) and illustrates the risk of death in 1987 from a range of hazards.

Activity	Risk of an individual dying in any one year
Influenza	1 in 500
Road accident	1 in 8,000
Playing football	1 in 25,000
Accident at home	1 in 26,000
Accident at work	1 in 43,000
Hit by lightning	1 in 10,000,000
Release of radiation from nearby nuclear power station	1 in 10,000,000
Struck by falling tree (2009)	1 in 20,000,000

Based on the above independent data and advice this Good Practice Guide has adopted the 1 in 10,000 threshold of acceptable annual risk of death or significant harm from any particular tree hazard. The threshold will be applied flexibly, and balanced with the benefits conferred by the tree. Where a tree has special value a risk greater than 1 in 10,000 might be tolerated. Certain sites and trees, in some circumstances, attract a lower limit of acceptable risk because the Council may choose to manage risks to vulnerable groups differently. Whilst guided by the threshold, the treatment of trees around the threshold may be considered on a case-by case basis.

2.4 Quantifying Risk - the QTRA Approach

This Good Practice Guide uses the Quantified Tree Risk Assessment methodology as a tool to assist in assessing the risk of harm from trees, which includes a formal inspection, with detailed inspections carried out as necessary.

A purely reactive approach to risk management is difficult to defend in the event of an incident. Instead, Staffordshire Moorlands District Council is moving towards using the principles of Quantified Tree Risk Assessment (QTRA) for managing tree failure risk. The key feature of QTRA is its position that the condition of trees should not be the first consideration. Instead, tree managers should consider first the usage of the land on which the trees stand, which in turn will inform the process of assessing the trees.

QTRA applies established and accepted risk management principles to tree safety management. It is based in part on published academic research, guidance from the Health and Safety Executive and other government bodies, and UK government statistics. The QTRA methodology is regularly refined through updated User Manual and Practice Notes.

The QTRA system evaluates risk in terms of:

- **Targets** - firstly, the targets (people and property) underneath or within falling distance of the trees are assessed and quantified, so that the inspecting Officer can determine whether or not, and to what degree of rigor, a survey or inspection of the trees is required.
- **Impact Potential (Size)** - the tree or branch in question is then considered in terms of both impact potential (size) and, where necessary, any notable degradation which may be considered to significantly reduce its mass and impact potential.
- **Probability of Failure** - This is an assessment of the likelihood that the tree or branch will fail, based on the observations, technical knowledge and experience of the inspecting officer.

Values derived from the assessment of these three components (target, impact potential and probability of failure) are combined to calculate the probability of significant harm occurring.

QTRA conforms to standards accepted in the UK as best practice in the management of industrial and workplace risk and provides:

- A clear structure within which to assess tree safety
- A framework within which trees can be assessed at all levels of detail, from an overview of the municipality to the detailed appraisal of a single tree
- A numerical basis for comparative risk assessment of trees
- A numerical basis for the application of a threshold of acceptable risk.

The system moves the management of tree safety away from labeling trees as either 'safe' or 'unsafe' and thereby away from requiring definitive judgments of the Council's arboricultural officer or their advisors. Instead, QTRA quantifies the risk of significant harm from tree failure in a way that enables the Council to balance safety with tree values and operate to a predetermined limit of reasonable or acceptable risk.

3. Inspection Zones.

3.1 Zone Analysis

The focus of QTRA on land use directs the Council to dealing firstly with trees in busier areas and according to the value of who or what might be harmed or damaged. This initial 'target' analysis is achieved by placing sites within common categories of target value and occupation. Such 'zoning' of people and property is the first step recommended in the evolving national guidance (NTSG 2011).

The zone analysis for each site which SMDC are responsible for is the first task to be undertaken in this emerging Tree Risk Management strategy. This will be a three step process:

1. Identification of sites which SMDC manages.
2. Initial desk top assessment of sites to identify the sites likely to be a high risk based on targets eg adjacent to busy 'A' roads highways and / or high footfall areas. This will enable the initial inspection of sites to be targeted. This process is described at 3.2 and 3.3
3. Site inspections to make assessment of risk of the site to determine re inspection intervals. Most initial site inspection will be a walk over survey as described at 4.5

The sites in SMDC ownership will be recorded on the ezytreev management systems along with the risk assessment for each site and the tree inspection records.

3.2 Zone Analysis of Staffordshire Moorlands District Council Trees.

Sites managed by Staffordshire Moorlands District Council will be zoned in to 4 broad categories; high, moderate, low and very low. These are defined as follows

- **High** – areas where there are known to be mature trees and there is high occupancy. In particular mature trees within falling distance of A Roads, railways, high footfall areas in major parks and town centres and play areas
- **Moderate** – areas where there are mature trees within falling distance of B Roads, residential areas and moderately frequented areas of major parks.
- **Low** – Less frequented opens spaces, or areas which would fall into a higher category but only have ornamental or relatively small trees.
- **Very low** – These are sites where there are no trees, or very small young trees or where there are trees where the council has no or very limited liability for example a new housing estate with no public space or highway trees. This might also apply in a very remote and infrequently used area.

Some sites might encompass all 4 types of zoning, for example some of the larger open spaces. Also there is some flexibility in the categorisation of a site, for example a play area may have high footfall but if on inspection it is found that there are only small ornamental trees its risk rating may be reduced accordingly.

3.3 Use of Zonal Categories

These are broad categories which will help to define the inspection regime for a site as a whole. The initial assessments will be based on desk top studies, previous inspection records and local knowledge. Following a visit to the site the tree officer will assess the categorisation based on findings.

Recent research has compared QTRA target assessments (property value and pedestrian volumes) made by Tree Officers at two sites, with its own more detailed survey data, and found that the Tree Officers had over-estimated these values (Papastavrou 2010). It concluded that there might be quite large discrepancies in estimates of usage and target value between the opinion of an assessor and data obtained through detailed surveys. However, the data

collection approach taken for the research entailed 37 hours of data collection at these two sites. While we agree that QTRA calculations should be based on reliable data, it is also important that data collection must be proportionate to the risk.

The broad categories although derived from the QTRA approach do not have specific probabilities attached to them, as the variables on any one site are too great for this to be a meaningful exercise. If a specific QTRA assessment is undertaken for a site based on meaningful data this would inform the categorisation of a site. The rationale behind the categories is that those sites most frequently occupied where the potential for harm is greatest are inspected more frequently.

4. Inspection Regime

4.1 Inspection and Risk Assessment

The Health and Safety Executive states that:

“Given the large number of trees in public spaces across the country, control measures that involve inspecting and recording every tree would appear to be grossly disproportionate to the risk.” (HSE, 2007)

The HSE also says in the same document:

[a quick visual check can be]) “carried out by a person with a working knowledge of trees and their defects, but who need not be an arboricultural specialist. Informing staff who work in parks or highways as to what to look for would normally suffice.”

It follows therefore that it is not necessary for the Council’s arboricultural officer to inspect and record every Council tree, instead, the risk assessment and inspection of the council's tree population using the methods described below.

4.2 Non-specialist Survey

Other members of the Operational Services Team and Health and Safety staff undertake surveys of land under Council control and advise the arboricultural officer of any trees with obvious defects so that the need for a more detailed inspection is brought to the attention of the arboricultural officer, and can be actioned. They therefore contribute to inspecting trees. It is acknowledged that the role of these staff members could be enhanced with some additional training to raise awareness of potentially hazardous trees. Appendix 1 lists posts which contribute to the inspection of trees.

4.3 Arboricultural Inspections

The qualifications of the Council's arboricultural officer are attached at Appendix 2, it is important that the continuing professional development of the officer is maintained, particularly in relation to risk assessment of trees, to ensure that this Good Practice Guide is defensible.

If anyone is employed to undertake inspections on behalf of the Council they must be qualified to at least a Level 3 professional arboricultural qualification as a minimum. Level 3 will be defined using the qualification requirements towards the Arboricultural Association membership grades as a reference. This requires a Qualifications and Credit Framework Level 3 qualification in arboriculture (such as BTEC National Diploma or Technician's Certificate in Arboriculture), or in a related subject if there is also a minimum 3 years of industry experience. The Professional Tree Inspectors' qualification from Lantra is also of benefit.

Where additional expertise is needed to inform an especially complex or contentious tree management decision, this must be sought from an external, suitably qualified arboricultural consultant.

4.4 Record Keeping and Tree Management Systems

Staffordshire Moorlands District Council uses a tree management system called ezytreev. This is a digital map based system where records of tree inspections and works can be recorded. All roads in the district are listed on this system and Council-owned sites will be added to the records. The aim is to have each site managed by SMDC recorded with at least an initial desk top risk assessment and high priority sites inspected by the end of 2016.

All inspections are to be recorded on this system, whether they are a site walk over survey or an individual tree inspection. The system will also be used to issue works to contractors and record when the works have been completed. The system also has the facility to record QTRA calculations. If a particular tree(s) on a site have, for whatever reason, to be re-inspected before the overall date for the site the system will highlight this.

The database will allow the Council to confidently defend claims of liability. This Good Practice Guide, and the tree management records within the database, will form a transparent documentary system of tree risk management.

4.5 Walk-over

Inspections and surveys will be carried out by the council's qualified Tree Officer or by a competent consultant (see 4.3). Each site as described in section 3 will be visited and where there are trees present a 'walk-over' survey will be undertaken. Following the initial assessment of the site the frequency of subsequent walk over surveys will be determined by the risk category.

When a walk over survey is undertaken all the trees are given a brief visual inspection but normally only those trees with significant defects, a scheduled re-inspection or that require work are individually recorded. Particular attention is given to trees in high risk areas, e.g by high occupancy areas, roads and buildings.

4.6 Individual Tree Risk Surveys

The individual tree inspection will inform management options to reduce the 'risk of harm' to within acceptable limits. An individual visual assessment of the tree will be made looking for defect symptoms and vitality. If there is no sign of a problem then the investigation is concluded. If a defect is suspected on the basis of symptoms, its presence or absence is confirmed by examination. If a defect is confirmed and has potential to present a significant risk of harm, the tree might be evaluated in more detail and/or remedial works specified (see section 5). On occasions a further inspection date may be set to monitor the progression of a defect or to view the tree in a different season.

4.7 Reactive Tree Risk Assessments

The Council receives many enquiries each year with concerns about trees in the district. The concern may be actual or perceived, and may relate to Council owned or private trees. These concerns demand a response from the Council's arboricultural officer. The response must be appropriate and considered, and within the legal powers available to the council.

Where tree safety concerns are raised about a Council owned tree, a site visit will be made, an inspection carried out as described in 4.6 and action taken as appropriate and in accordance with the procedures set out in Good Practice Guides 1 and 2. If the tree is a non-Council tree and sufficient efforts have been made to get the tree owner to take responsibility without any effect, then an officer of the Council will visit the site and a risk assessment will be carried out

The Council will intervene where a significant risk to people or property exists, and where the QTRA assessment identifies an unacceptably high risk (see section 2).

We may also decide to intervene if it is clear that the risk is likely to worsen significantly in the near future. The Council will not intervene where our assessment finds that an actual risk is tolerable and the cost of implementing risk reduction is not justified. The Council has no legal obligation to intervene for example where the trees are causing a minor nuisance such as shading of properties, poor TV reception or natural litter caused by trees.

4.8 Privately Owned Trees – the Council's Legal Powers

The Council has largely delegated its powers under the Town and Country Planning Act 1990 in relation to trees, to its officers, although presently power to refuse consent for work to protected trees is not delegated and is a function of the Planning Applications Committee. Under the Act, work to privately-owned trees protected by a Tree Preservation Order, or situated within a Conservation Area, is likely to be subject to the Council's approval. The Council may approve of proposals of work, may refuse to allow the work, or may make a new tree preservation order to prevent it proceeding.

Where tree work proposals are made on the grounds of risk to people or property, the Council's arboricultural officer will apply the QTRA risk assessment methodology to help inform the Council's position. On the basis of such an assessment, the Council may ask for additional expert evidence before a decision can be reached.

The Council has powers under Section 24 and 23 of the Local Government Miscellaneous Provisions) Act 1976 to give notice to a tree owner requiring them to carry out remedial work to dangerous trees. In default of compliance with such notice (or if the tree owner is not identified) the Council may carry out the minimum work required to make the tree safe and seek to recover costs from the owner.

Staffordshire County Council (SCC), as the Highway Authority, have similar powers in relation to trees which are a hazard to the highway under Section 154 of the Highways Act 1980.

5. Proportionate Response

5.1 General Approach

The Council will make decisions on appropriate intervention where the probability of harm from trees has been assessed, and exceeds an acceptable limit.

5.2 Prioritisation of Remedial Works

The HSE suggests that an appropriate limit for a risk imposed on the public should be set at 1 in 10,000 per annum; dependant on the circumstances the risk may still be considered unacceptable below this threshold. Where an unacceptable risk is identified for a tree, or group of trees under Council responsibility, the following action will be taken depending on the circumstances, including practical matters such as traffic control permissions. There are 3 priority levels for dealing with an unacceptable risk:

Emergency - Imminent hazards: The public will be isolated from the area and remedial work carried out as an emergency as soon as practical.

Urgent – Risk reduction – High Hazard – work to be undertaken within 14 days.

High - Risk reduction - Works to be undertaken within 2 months

Tree works may also be prioritised as:

Moderate – Risk reduction – works to be undertaken within 1 year will be allocated to trees where the risk is tolerable (below 1/1,000,000) and management is considered to be cost effective. In these cases the works will be given appropriate priority within programmed works. It should be noted that other non-risk related tree works may be given the same priority. Priorities for non-risk related issues are identified in the ezytreev system so that risk related works can easily be identified

A **Low** priority category is also used for works to be undertaken when resources allow, these may be works designed to reduce a potential future risk but the current risk is within tolerable limits

5.3 Alternative Intervention for High Amenity Trees

In the case of high amenity trees where arboricultural intervention could have a significant effect on the value of trees, modification of targets may be considered first for example moving a seating area or diverting a path. Such actions could eliminate or reduce the need for arboricultural intervention. These actions will be assessed on a case by case basis.

5.4 Tree Works Standards

All arboricultural operations will be specified and implemented in accordance with current best practice such as BS 3998:2010 Tree Work – Recommendations, the

Council's Tree Strategy Good Practice Guide 1: Tree Work, and the Arboriculture and Forestry Advisory Group guidance. Also as set out in the Arboricultural contract documents.

6. Monitoring and Review

6.1 Site Inspections General Approach

There is no specific guidance of legislation determining the frequency for tree risk assessments or inspections. Therefore the frequency of reassessment will be determined by the initial and subsequent assessments on a site by site basis. In broad terms this will be:

High risk sites: Re inspection will be set at 18 months (1.5 years), so that the trees can be viewed in alternate seasons.

Moderate risk sites: Re inspections will be set at 36 months (3 years).

Low risk site: Re inspection set at 60 months (5 Years)

Very low Risk: Review every 120 months (10 years).

Due to practicality and resources the aim is to undertake re-inspections close to the due date with priority given to the high risk sites and more tolerance on re-inspections on low risk/moderate risk sites. If a site is visited before its re-inspection due date, and if it is expedient to do so, then a walk over survey will be done and the next inspection date rescheduled accordingly.

6.2 Individual Tree Inspection Frequency

Tree inspection will also be triggered by individual re-inspection dates set for individual trees, or requests to inspect specific trees.

6.3 Review of Good Practice Guide

This Good Practice Guide will be reviewed every 2 years, or before if there is a significant change in policy, legislation, scope or resources.

7. Summary

- 7.1 The risk of being struck and killed by a tree falling is extremely low (HSE 2007). Risk from trees cannot be reasonably eliminated altogether, to do so would create an unacceptable loss of the many benefits that trees provide.
- 7.2 Staffordshire Moorlands District Council has a legal 'duty of care' to ensure that users and neighbours of its land are reasonably safe (Occupiers Liability Acts 1957 and 1984). The Council must also ensure that risks to its employees, contractors and visitors are reduced as far as is 'reasonably practicable' (The Health and Safety at Work Act 1974).
- 7.3 Based on National Tree Safety Group guidance 'Common Sense Risk Management of Trees', published December 2011 this Good Practice Guide manages the annual risk of death or significant harm from trees within the Health & Safety Executive's 'Tolerability of Risk Framework', by assessing risk and recommending control measures that reduce that risk as low as reasonably practicable, and below the 1 in 10,000 threshold of Tolerable Risk.
- 7.4 The HSE advise that inspecting and recording every tree would appear to be grossly disproportionate to the risk. Therefore a system of identifying areas of the highest risk and undertaking inspections of an appropriate type and a suitable frequency will be employed.
- 7.5 Inspections will be recorded on a database which will allow the Council to defend claims of liability. This Good Practice Guide, and the tree management records within the database, will form a transparent documentary system of tree risk management.
- 7.6 The Council will make decisions on appropriate intervention where the probability of harm from trees has been assessed, and exceeds an acceptable limit.

8 Further Information

8.1 For Further information contact

Arboricultural Officer
Staffordshire Moorlands District Council
Moorlands House
Stockwell Street
Leek
Staffordshire Moorlands
ST13 6HQ

Tel: 01538 395788

Email: steve.massey@staffsmoorlands.gov.uk

8.2 References

British Medical Association (1987) "Living with Risk"
Health and Safety Executive (2001) "Reducing Risks: Protecting People" HSE Books Sudbury, Suffolk http://hse.gov.uk/risk/theory/r2p2.pdf
Health and Safety Executive (2013) - Information Minute 01/2007/05 'Management of the risk from falling trees or branches', Health and Safety Executive Bootle http://www.hse.gov.uk/foi/internalops/sims/ag_food/010705.htm
National Tree Safety Group (2011) "Common Sense Risk Management of Trees" Forestry Commission http://www.forestry.gov.uk/pdf/FCMS024.pdf/\$file/FCMS024.pdf
Papastavrou, V. et al. (2010) Determining pedestrian usage and parked vehicle monetary values for input into Quantified Tree Risk Assessments – Two case studies from urban parks in Great Britain. Arboricultural Journal 2010, 33
Quantified Tree Risk Assessment User Manual V5.1.3 February 2014

8.3 Useful Contacts and Websites

Arboricultural Association	www.trees.org.uk
British Standards	www.bsstandards.co.uk
International Society of Arboriculture	www.isa-arboriculture.org
National Tree Safety Group	www.ntsg.org.uk
Quantified Tree Risk Assessment	www.qtra.co.uk
Forestry Commission/ tree safety	www.forestry.gov.uk/forestry/INFD-7T6BPP

Appendix 1

In light of changes in structure the skills of the Operational Services team members need to be assessed and possibly more basic training undertaken to advise on what to look for and how and when to report issues.

Post	Inspection responsibilities	Relevant training
Operational Services team members (HPBC/SMDC)	Those with responsibility for parks, open space and amenity land	Horticultural (some)
Cemeteries Superintendent (HPBC/SMDC)	Cemeteries and closed church yards	Horticultural
Asset Management Officers (HPBC/SMDC)	Council owned land and buildings	None
Corporate Health & Safety Adviser; Health, Safety and Emergency Planning Assistant (HPBC/SMDC)	Council owned and managed land and buildings	Health and safety assessment.
Tree work contractors	When undertaking tree works on behalf of the Council, advised to report problems to the arboricultural officer	Arboricultural tree hazard assessment

Appendix 2 - Arboricultural Officer's Qualifications

Steve Massey

Staffordshire Moorlands District Council Arboricultural Officer 1999 to date.

Qualifications /experience.

- MSc Rural Resource Management
- Technician Member of the Arboricultural Association (for which QCF Level 3 qualification is a requirement)
- 26 years experience inspecting, advising on and managing trees as local authority arboricultural officer

Also participates in continuing professional development including QTRA, visual tree assessment, mechanics of tree failure, risk assessment and pest and diseases.