

NATIONAL TREE SAFETY GROUP

Common sense risk management of trees

Landowner summary of guidance
on trees and public safety in the UK
for estates and smallholdings

“Safety is but one of the many goals to which we aspire; the mistake that is often made is to focus on safety as if it is the only goal”

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■ The Lucombe Oak, Phear Park, Exmouth; retained as children's play equipment. © The Tree Council

Introduction

This is the summary of the NTSG's full guidance document *Common sense risk management of trees*. It is intended for landowners of estates and smallholdings and all those who manage, advise and work on them.

This summary does not contain references, notes, detailed discussion, contacts or acknowledgements. If required, please refer to the main document for these and for more detailed information on the context and rationale of guidance given below.

THE GUIDANCE

This new guidance document provides advice for the tree owner that is succinct, comprehensive but most of all practical in its application. The broad spectrum of member organisations of the NTSG is reflected in the scope of the advice within the document which covers trees growing in forests and estates in remote areas, through land that has occasional public access to land and individual properties where there is frequent public access and with land adjacent to roads.

The NTSG believes that one fundamental concept should underlie the management of risks from trees. It is that the evaluation of what is reasonable should be based upon a balance between benefit and risk. This evaluation can be undertaken only in a local context, since trees provide many different types of benefit in a range of different circumstances.

The NTSG 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 low
- tree owners have a legal duty of care
- tree owners should take a balanced and proportionate approach to tree safety management

Managing the risk from trees is the responsibility of the owners and managers of the land on which they grow.

THE OBJECTIVES OF TREE RISK MANAGEMENT

The management of risk, when properly organised, enables an organisation, among other things, to:

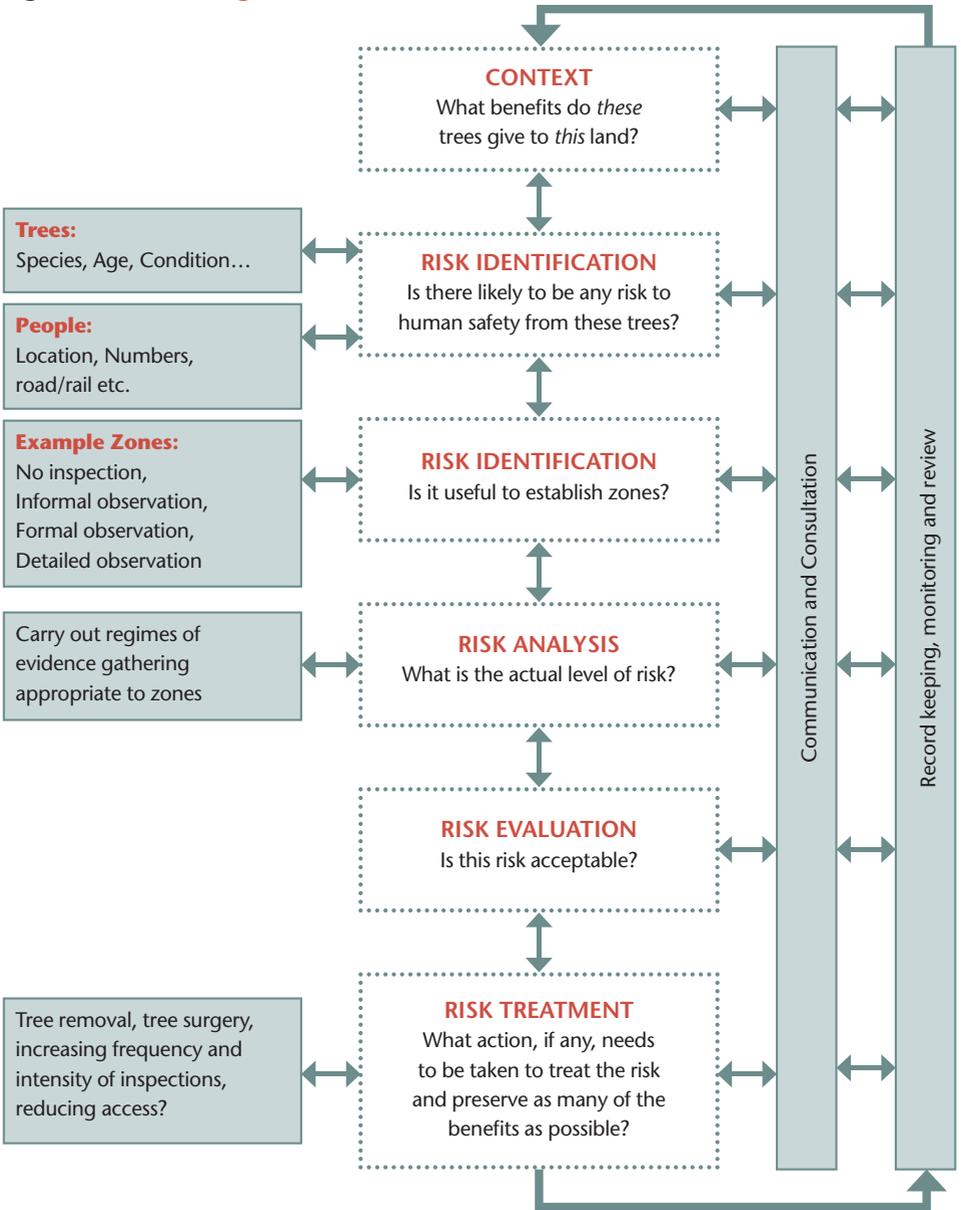
- increase the likelihood of achieving its objectives
- identify and control the risk

- comply with relevant legal and regulatory requirements
- improve stakeholder confidence and trust

Trees form part of the overall landscape and their presence has many different benefits depending on how the land is used. Not all trees are managed and, even for those that are, such management forms a component of overall land management. Human safety is one part of that management. Risk management can be undertaken only by understanding the trees and their value to people in the context within which they grow. The requirement under health and safety legislation is to have a suitable and sufficient risk assessment, and to apply measures that are reasonable and practicable. This guidance shows an integrated approach to that process within the wider context of land ownership and management.



Figure 1. Risk Management Process



Understanding the risks from trees

THE OVERALL RISK TO HUMAN SAFETY IS EXTREMELY LOW

Research by the Centre for Decision Analysis and Risk Management (DARM), commissioned by the NTSG, has addressed the risk to people from trees. It demonstrates that the overall risk to the public from falling trees is extremely low, representing about a one in 10 million chance of an individual being killed by a falling tree (or part of a tree) in any given year.

So far as non-fatal injuries in the UK are concerned, the number of accident and emergency cases (A&E) 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. Footballs (262,000), children's swings (10,900) and even wheelie bins (2,200) are involved in many more incidents.

The research also shows that there is limited societal concern about risks of this type (although there may be adverse publicity in the immediate aftermath of an individual incident). The analysis indicates that it would be unlikely that adjustments to the current overall management regime would reduce the risk to health and safety in any significant way.

REAL RISKS AND PUBLIC CONCERNS

Trees grow in many different situations, and within areas of widely varying levels of public access or other human activity. Where it is appropriate to manage trees, this management should seek to enhance their significance (in terms of value, access and other benefits) and all the other ecosystem service, biodiversity and social benefits they provide, and to manage the undesirable impacts they can have (such as damage to property and risks to human safety). Considerable concern and uncertainty about managing trees for safety has arisen in the last few years. This has largely been stimulated by a number of court cases and other responses to rare incidents where a falling tree or branch has killed or injured a person. Addressing these concerns requires information about the "real" risk involved and the level of public concern.

HAZARDS

Very simply, a hazard is something that can cause harm and here, the hazard is a tree. Risk is characterised by reference to potential events and consequences, or a combination of the two. It is often expressed as a combination of an event's consequences and the likelihood of it occurring. In this case, a potential consequence is death or serious injury. Levels of risk are judged against a baseline, which is usually

the current overall maintenance or control regime for that hazard (the tree). When assessing trees, owners and managers need to judge whether the management measures they adopt will fulfil society's reasonable expectations. "Reasonableness" is a key legal concept when considering the risks of trees to the public and tree owners' obligations. Deciding what is reasonable can be undertaken only with regard to the trees' place within the wider management context and how that context influences decisions locally. The Health and Safety Executive (HSE) has identified that an individual risk of death of one in one million per year for both workers and the public corresponds to a very low level of risk. It points out that this level of risk is extremely small when compared with the general background level of risk which people face and engage with voluntarily in the course of everyday life.

SIGNIFICANCE OF THE IDENTIFIED RISKS

The individual risk of death attributable to trees is 10 TIMES LESS than the threshold of one death in one million per year that the HSE says people regard as insignificant or trivial in their daily lives. Because trees present a very low risk to people, owners and managers should be able to make planning and management decisions by considering how trees fit into a particular local context and avoid unnecessary intervention, survey and cost. This approach will help them ensure that any management is proportionate and strikes an appropriate balance between the real risks and benefits.

MANAGING THE RISK FROM TREES

Tree management or the lack of it should not expose people to significant likelihood of death, permanent disability or serious injury. Accidents are on occasions unavoidable. Such risk is acceptable only in the following conditions:

- the likelihood is extremely low
- the hazards are clear to users
- there are obvious benefits
- further reducing the risks would remove the benefits
- there are no reasonably practicable ways to manage the risks

In its position statement, the NTSG argues that it is reasonable that sufficiently large organisations that own or manage trees develop a management strategy (in line with practice in other sectors). This strategy may strike a balance between risks present and benefits accrued. An organisation that publishes and maintains a tree strategy or management plan, part of which includes information on their risk management plan for the trees they own, is much better placed to demonstrate they have fulfilled their duty of care.

What the law says

THE ROLE OF THIS GUIDANCE

This document may be presented to a court for consideration as supporting documentation in any case involving death or personal injury caused by a falling tree or branch. Reported judgments already demonstrate that courts will consider publications of this nature when addressing the duty of care. It must, however, be appreciated that the guidance in this document will not in itself determine a court's judgment in an individual case. First, all cases are sensitive to their own facts. Second, a court will always reserve to itself the decision as to whether a tree owner has acted as "a reasonable and prudent landowner". This guidance can, however, inform the court in the making of that decision.

THE LEGAL FRAMEWORK

Under both the civil law and criminal law, an owner of land on which a tree stands has responsibilities for the health and safety of those on or near the land and has potential liabilities arising from the falling of a tree or branch. The civil law gives rise to duties and potential liabilities to pay damages in the event of a breach of those duties. The criminal law gives rise to the risk of prosecution in the event of an infringement of the criminal law.

THE CIVIL LAW

The owner of the land on which a tree stands, together with any party who has control over the tree's management, owes a duty of care at common law to all people who might be injured by the tree. The duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property.

THE DUTY HOLDER

This is the person who has control of the tree's management whether as owner, lessee, licensee or occupier of the land on which the tree stands. The relevant highway authority is responsible for trees on land forming part of the highway.

THE PERSON TO WHOM THE DUTY IS OWED

This is any person who can be reasonably foreseen as coming within the tree's vicinity and being injured by a fall of the tree or a branch from the tree. Those using highways, footways, public footpaths, bridleways, railways and canals are likely to come within striking distance of trees on adjacent land. In public spaces, and

semi-public spaces such as churchyards and school grounds, those working in or visiting them can be expected to come within the vicinity of trees. On private land, visitors and employees can also be expected to come within the reach of trees. Trespassers may also, in certain circumstances, be expected to come within the vicinity of trees on private land.

THE DUTY OWED

This can be stated in general terms as being a duty to take reasonable care for the safety of those who may come within the vicinity of a tree. The courts have endeavoured to provide a definition of what amounts to reasonable care in the context of tree safety, and have stated that the standard of care is that of “the reasonable and prudent landowner”. The tree owner is not, however, expected to guarantee that the tree is safe. They have to take only reasonable care such as could be expected of the reasonable and prudent landowner. The duty owed under the tort of nuisance is owed by a tree owner to the occupier of neighbouring land. The duty, however, is no different to the general duty owed under the tort of negligence.

It is the duty holder’s fundamental responsibility, in taking reasonable care as a reasonable and prudent landowner, to consider the risks posed by their trees. The level of knowledge and the standard of inspection that must be applied to the inspection of trees are of critical importance. It is at this point that the balance between the risk posed by trees in general terms, the amenity or other values of trees and the cost of different types of inspection and remedial measures becomes relevant.

THE STANDARD OF INSPECTION

The courts have not defined the standard of inspection more precisely than the standard of “the reasonable and prudent landowner”. In individual cases, the courts have sought to apply this general standard to the facts of each case. However, there is no clear and unambiguous indication from the courts in regard to the extent of the knowledge about trees a landowner is expected to bring to tree inspection in terms of type and regularity of inspection. Generally, the courts appear to indicate that the standard of inspection is proportional to the size of and resources available (in terms of expertise) to the landowner. It is of note that the HSE states in the HSE Sector Information Minute *Management of the risk from falling trees* (HSE 2007), that: “for trees in a frequently visited zone, a system for periodic, proactive checks is appropriate”.

THE CRIMINAL LAW

The Health and Safety at Work etc Act 1974 places a duty on employers to ensure, so far as is reasonably practicable, that in the course of conducting their undertaking, employees and members of the public are not put at risk (sections 2(1) and 3(1) respectively, see also 3(2) in respect of self-employed persons). The acts of felling or lopping a tree clearly fall within the scope of this duty. It is also likely that the growing and management of trees on land falls within the scope of the duty if such operations fall within the employer's undertaking. The duty is subject to the words "so far as is reasonably practicable". This proviso requires an employer to address the practical and proportionate precautions which can be taken to reduce a risk. The courts have generally been unwilling to take into account environmental or aesthetic values when considering whether a step is reasonably practicable, confining the consideration to whether a precautionary step can "practically" be undertaken. Nevertheless, in *HSE v North Yorkshire County Council* (20.5.10) Wilkie J., when directing the jury as to the meaning of "reasonably practicable", identified as a material consideration "the benefits of conducting the activity".

He said (NTSG emphasis):

"Now, in this context what does 'reasonably practicable' mean? Well, as you have been told correctly, it is a narrower concept than what is physically possible. It requires a computation to be made by the employer in which the amount of risk is placed on one scale and the sacrifice involved in the measures necessary for averting the risk, whether in terms of money, time or trouble, or the benefits of conducting the activity, are placed in the other. If there is a gross disproportion between them where the risk to health and safety is insignificant in relation to the sacrifice and/or loss of benefit involved in averting that risk then the defendant discharges the onus upon him and is entitled to be acquitted, but if the defendant does not persuade you of that on the balance of probabilities then you would convict."

The Management of Health and Safety at Work Regulations 1999 require employers, and self-employed persons, by regulation 3 to "make a suitable and sufficient assessment of the risks to the health and safety of persons not in his employment arising out of or in connection with the conduct by him of his undertaking". This requires an employer, and a self-employed person, to undertake a risk assessment of the tree stock on the land which forms part of the undertaking. Breach of the duty under the Act, or the regulations derived from the Act, can give rise to a criminal prosecution against the employer.

Reasonable, balanced tree risk management

RESPONSIBLE MANAGEMENT

Landowners who already sensibly manage their trees can be reasonably confident that there is no need for any radical change driven by a fear of the law, though they may find this guidance useful when reviewing management practice. No tree can be guaranteed to be safe. As long as we retain trees, we cannot achieve zero risk. A disproportionate response to the actual risks posed by trees leads to unnecessary intervention, particularly alongside roads and public places. Disproportionately responding to risk itself runs the risk of diminishing the landscape and depriving the whole community of the enjoyment of trees and their wider benefits.

LEGAL REQUIREMENTS

The law requires only that people should take reasonable care to avoid acts or omissions which cause a reasonably foreseeable risk of injury to persons or property. The generally agreed standard to be achieved is that of a reasonable and prudent landowner.

LOW RISKS AND COMMON SENSE

Generally speaking, the existing tree management regimes in the UK's towns, cities and countryside contribute to the acknowledged low risk of anyone being killed or injured by a fallen or falling tree or branch. The normal practices that have prevailed over the past decades have, in large measure, been reasonable and proportionate. These management regimes have worked in conjunction with people's common sense approach to appraising risk from trees.

DEFENDABLE PRACTICE

Defendable management is consistent with a duty of care based on reasonable care, reasonable likelihood and reasonable practicability. Landowners and managers who know how important their trees are tend to take an interest in them; including their setting and how people use their land and the benefits that trees bring. It is reasonable that decisions regarding tree safety are considered against a background of the general low risk from falling trees. Being reasonable involves taking actions proportionate to the risk. Reasonable tree management has both reactive and proactive elements. While the owner or manager may need to react to events involving dangerous trees as they arise, it is also prudent to have forward-looking procedures to keep tree-related risks at an acceptable level. These procedures need not be complicated and may be incorporated into a tree strategy or management plan where applicable.

Defect and obvious defect

WHAT IS A DEFECT?

The term “defect” can be misleading, as the significance of structural deformities in trees (variations from a perceived norm) can be extremely variable. NTSG definition: “a defect in the context of the growing environment of a tree is a structural, health or environmental condition that could predispose a tree to failure”.

WHAT IS AN OBVIOUS DEFECT?

The courts and specialist literature often apply the term “obvious” when referring to tree defects of which an owner or adviser should be aware. Obvious defects are likely to be so apparent that most people, whether specialist or not, would recognise them. While obvious defects may include external indications of potential structural failure, they take many forms, not all of which are significant hazards. Defects pose risks only where there is a likelihood of harm. An obvious risk defect might be a large tree that is clearly breaking up over a well-used road. A person doing a safety inspection is on the lookout for obvious defects posing a serious and present risk, particularly where the danger is immediate.



■ A wood decay fungus (*Ganoderma applanatum*) that may have implications for tree stability.
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Key steps in tree safety management

THE ESSENTIALS

A reasonable and balanced approach forms the basis of a tree safety strategy for sensible tree safety management. By a “strategy”, we mean a plan that guides management decisions and practice, in a reasonable and cost-effective way, typically covering 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

A tree safety strategy may not necessarily be supported by extensive records. It may be self-evident through general prudent practice and behaviour. Alternatively, a strategy may be explicitly formulated and expressed through documents relating to management practice. If reasonably carried out, the strategy should meet the duty of care required by law, without the need for an overly bureaucratic approach or excessive paperwork. In the event of an accident, documents may provide supporting evidence that reasonable care has been taken.

KEEPING RECORDS

Records, including maps, provide the basis for safety management reviews and, in the extremely rare event of an accident, can support evidence of reasonable tree management. It is not necessary to record every tree inspected. However, records of trees presenting a serious risk and requiring treatment are useful, as is a record of how they have been treated. When inspections are carried out, records can demonstrate that the owner or manager has met a key component of their duty of care. Other useful ways of demonstrating reasonable assessment and management of trees include recording recommendations for work and when tree work has been carried out.

ZONING

Zoning is a practice whereby landowners and managers define areas of land according to levels of use. This practice prioritises the most used areas, and by doing so contributes to a cost-effective approach to tree inspection, focusing resources where most needed. It contributes to sensible risk management and a defensible position in the event of an accident. It may be a reasonable outcome of the zoning process to decide that no areas require inspection. Classifying levels of use in this way

requires only a broad assessment of levels of use. Typically, two zones, high and low use, may be sufficient. High use zones are areas used by many people every day, such as busy roads, railways and other well-used routes, car parks and children's playgrounds or where property may be affected. Low use zones are used infrequently and may only require irregular inspection if at all. While owners and managers may deem it appropriate to use a more sophisticated approach, designating three or more zones, in the event of an accident whichever system is adopted may require justification according to the standard set.

Normally, the best person to do an initial assessment is someone familiar with the land, how it is used and what trees are present. Typically, this could be the landowner, occupier or land manager. It does not require a tree specialist to zone a site.

TREES WITHIN FALLING DISTANCE OF ROADS, RAILWAYS ETC.

Among the relatively few accidents from falling trees each year, the greatest risk to public safety has proved to be from trees within falling distance of where people move at speed in vehicles. However, even trees in well-used areas pose an extremely low overall level of risk to public safety. On average over the past decade, four people a year have died from roadside trees falling onto vehicles or from collisions with fallen trees, mainly because:

- risk of harm from falling trees is related to the force of impact
- the likelihood and extent of harm is influenced by the speed at which vehicles may impact
- risks are higher when vehicles are travelling at speed in high winds

It is both the high usage of roads and the speed at which people travel along them that makes this the most likely way that people will be killed by trees.

Even in well-used areas, inspecting and recording each tree is not always necessary. Trees with structural faults, but valued for their habitat or amenity interests, that are retained in frequently used areas may require specific assessment and management. Trees in well-used natural woodland or woodland surrounding housing or a public park may only warrant an informal or non-onerous prioritised system of assessment to identify trees warranting closer inspection.

TREES IN INFREQUENTLY USED AREAS

The risk of death or serious injury from trees in 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.

TREE INSPECTION

The three types of inspections are:

- informal observations
- formal inspections
- detailed inspections

INFORMAL OBSERVATIONS

Informal observations of trees contribute to wider management and tree safety. They are essentially those day-to-day observations of trees made by owners and employees of a site who have good local knowledge of the trees and location and see them during the course of their daily lives and work. While not going out of their way to make an assessment of the condition of the tree, they are nonetheless aware of it and any changes that may occur over time. In some circumstances, informal observation may be considered reasonable and appropriate when owners and staff are able to assess the trees' health and any structural weaknesses that may pose an imminent threat to public safety.

May be undertaken by:

People with good local knowledge and familiarity with local trees who are not tree specialists, but rather those closely associated with a property, such as the owner, gardener, other employee or agent, who understands the way the property is used (areas most and least frequented) and the extent of the danger, should a tree be found that is clearly falling apart or uprooting. **Reports of problems by staff or members of the public are a fundamental part of informal observations and should be acted upon.**

Frequency of inspection:

Informal observations contribute significantly to public safety, being important for deciding when action is needed and when more formal assessment is appropriate. They are generally on-going and undertaken as a given part of daily life on a site with trees and public access.

FORMAL INSPECTIONS

Formal inspection of a tree is when a specific visit to the tree is made with the sole purpose of performing an inspection that is not incidental to other activities. The spectrum of formal inspection ranges from survey work for tree inventories, to health and condition assessments. These may be carried out through drive-by and walk-over inspections or ground-based visual checks. Drive-by and walk-over

inspections are accepted types of reasonable risk assessment under certain circumstances. It should be noted that reliance on drive-by inspections is not appropriate in busy urban areas. Initial drive-by inspections can, when appropriate, assist in deciding where tree management, walk-over or detailed inspection might be necessary. Simple formal inspection, through ground level visual checks in the course of walk-over surveys, provides a useful, cost-effective means of identifying clear and present signs of immediate instability (uprooting or other structural failure). This is an important means of identifying when further action is needed, including immediate tree surgery or further detailed inspection.

May be undertaken by:

People who do not necessarily have specific tree-related qualifications but do have a general knowledge of trees and the ability to recognise normal and abnormal appearance and growth for the locality. This includes an ability to recognise obviously visible signs of serious ill health or significant structural problems, such as substantial fractured branches or a rocking root plate which, were they to cause tree failure, could result in serious harm. They also need the ability to assess approximate tree height and falling distance from the tree to the area of use as well as when to request a detailed inspection.

Frequency of inspection:

Formal inspections will be undertaken as part of the implementation of the tree strategy or management plan for the site. Their frequency will be determined as a consequence of the zoning of the site together with consideration of prioritisation of the risk and the resources available to manage that risk. The decision is a judgment for the owner, agent or adviser, applying sensible reasonable behaviour in taking account of the site circumstances as a basis for good practice.

DETAILED INSPECTIONS

Detailed inspection of a tree should be applied for individual, high-value trees giving high-priority concern in well-used zones. The detailed inspection is normally prioritised according to the level of safety concern. It entails an initial ground-level, visual assessment by a competent specialist looking at the exterior of the tree for signs of structural failure. In a few special cases, further detailed investigations may be required, involving one or more of the following: soil and root condition assessments, aerial inspections of upper trunk and crown, or other procedures to evaluate the nature of suspected decay and defects, including using specialist diagnostic tools. Detailed inspections are therefore unusual, typically reserved for

trees valued for their heritage, amenity or habitat and which are suspected of posing a high level of risk, as already identified through owner interest or a previous formal or informal assessment.

May be undertaken by:

An appropriately competent person, experienced in the field of investigation that is to be carried out. Whoever is commissioning the detailed inspection should satisfy themselves as to the suitability of the inspector's qualifications, experience and professional indemnity and public liability insurance. A specialist involved in conducting a detailed tree inspection should be able to demonstrate the reasonable basis for allocating risks according to priority, and identify cost-effective ways of managing those tree-related risks.

Frequency of inspection:

Detailed inspection of a tree will normally be undertaken as a consequence of information obtained following informal observation or formal inspection of the tree. Alternatively, if the tree is a special tree it may be placed on a regular inspection regime that is determined by its location and the risk it poses.

SPECIAL TREES

Informal observation and formal inspections both have a reasonable likelihood of identifying trees posing a risk of serious harm in the near future. Important trees that owners want to retain, eg for heritage, habitat or visual amenity, but which may present a significant risk, are likely to require regular specialist detailed inspection to manage them without serious loss of the benefits they provide. Like formal inspections, the decision on the frequency of these inspections is a judgment for the owner and their advisers based on the circumstances and applying sensible reasonable behaviour as a basis for good practice.

REDUCING RISKS BY MANAGING ACCESS

For sites where special events greatly increase the number of people in the area within falling distance, restricting access is the best option. A large number of people on a site in very wet conditions can compact soil and harm tree roots. Though the effects of root damage can be slow to develop, they increase risks of tree failure.

Ways to reduce risks in well-used areas include:

- deterring informal parking beneath trees; damage to roots may not be apparent for many years and increases risk of failure
- re-locating facilities such as play equipment, seats, picnic tables, barbecues, information boards, commemorative plaques, hides, fishing platforms, horse jumps, feeding centres etc
- re-routing paths and tracks where legally allowed
- redesigning mown paths in areas of long grass, a proven method of directing people away from high-risk zones
- placing structures and assembly points beyond the falling range of trees

Effective ways of deterring access area:

- planting brambles and thorny shrubs
- using logs or piles of deadwood
- allowing grass to grow
- leaving brushwood around the tree
- temporary exclusion in adverse weather conditions
- changing the area's use, eg to hay meadow and for grazing

BALANCING RISK WITH BENEFITS

Outdoor activity increases in fine weather, with people remaining longer in certain areas. In summer, one option to reduce risk from falling branches is by the simple practice of not mowing under the trees' drip-line. However, within the play sector there is a strong recognition that it is important for children to get "back to nature", including interaction with trees. Decisions need therefore to balance benefits with risks when considering segregating trees and people.

The NTSG, its Management Committee and its individual member organisations in producing this report have endeavoured to ensure the accuracy of its contents. The guidance and views in this report should always be reviewed by those using the report in the light of the facts and merits of the particular case and specialist advice obtained as necessary. No liability for negligence or otherwise in relation to this report is accepted by the NTSG, its Management Committee, member organisations or their servants or agents.





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Further information

This leaflet is based on the key elements of the full guidance document, which is available from the Forestry Commission Publications Service as a hard copy and from the NTSG website as a free downloadable PDF:

www.forestry.gov.uk/publications

www.nts.org.uk

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