

Veteran Trees: A guide to risk and responsibility

What is a veteran tree?

A veteran tree is more than a single old organism. It is home to a wealth of interdependent plants, animals and micro-organisms that interact with and can contribute to the longevity of the tree.

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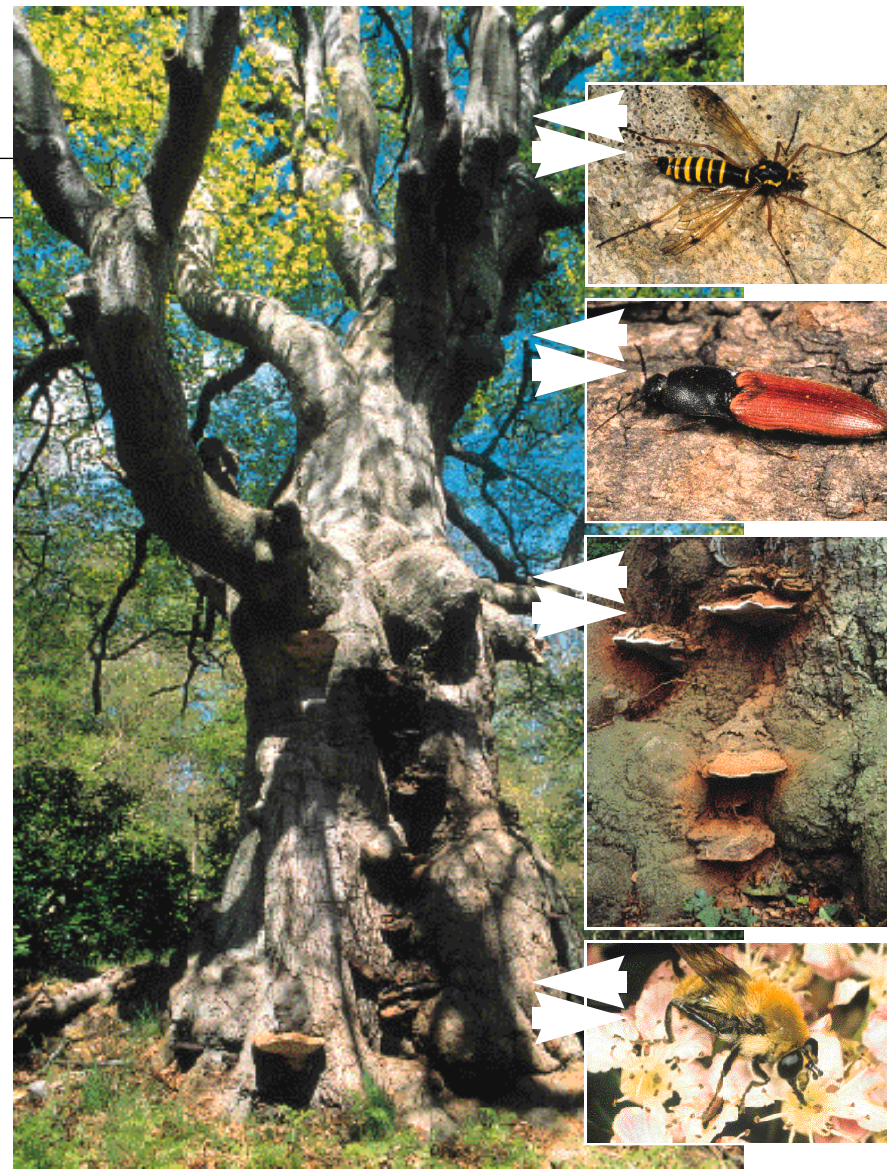
Veteran beech (Peter Wakely).

*A cranefly *Ctenophora flaveolata* (Roger Key).*

*A click beetle *Ampedus cardinalis* found in old oak trees (Roger Key).*

*A bracket fungus *Ganoderma resinaceum* on an old beech (Peter Wakely).*

*Bumble-bee mimic hoverfly *Criorhina floccosa* on hawthorn (Roger Key).*



Veteran trees A guide to risk and responsibility

The Veteran Trees Initiative was established to raise awareness of ancient trees and to encourage their informed and responsible management and continuity. A series of publications, which offer guidance on good practice, contribute to these aims. The publications include *Veteran Trees: A guide to good management*, and the *Specialist Survey Method*. The Initiative has also organised a range of demonstration and training workshops at different veteran tree sites.

This guide is concerned primarily with the physical structure of old trees and the risks posed by their potential for breakage or collapse. When trees threaten the safety of people or property, practical management guidance is needed. The advice relates specifically to the law of England and Wales, and is intended to enable ‘occupiers’ of land who have responsibility for management of veteran trees to:

- understand and meet their obligations in law associated with the prevention of harm;
- appreciate and manage risks associated with old trees and
- retain the maximum value of veteran trees as habitat, landscape and historic features.

Note: For simplicity, this guide refers throughout to “owners” of trees, but whoever has control over, or has been given responsibility for, land may be regarded in law as the occupier, and responsible for the trees on it (see *Duty of Care*, on page 3). The advice may therefore apply to owners, tenants, site managers, agents, advisors or contractors.

Acknowledgements

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The material is complex and should be read carefully. Any persons following the guidance in this publication should do so according to his/her own judgement and expertise. It is not intended to be a comprehensive document and the publishers, authors and contributors will not accept any liability for any errors, omissions, loss, damage, death or injury to persons or property or consequential loss as a result of the use, in any way, of the information contained within this document. If any person using the document has any doubts, appropriate legal advice should be taken.

Veteran trees A managers guide to risk and responsibility

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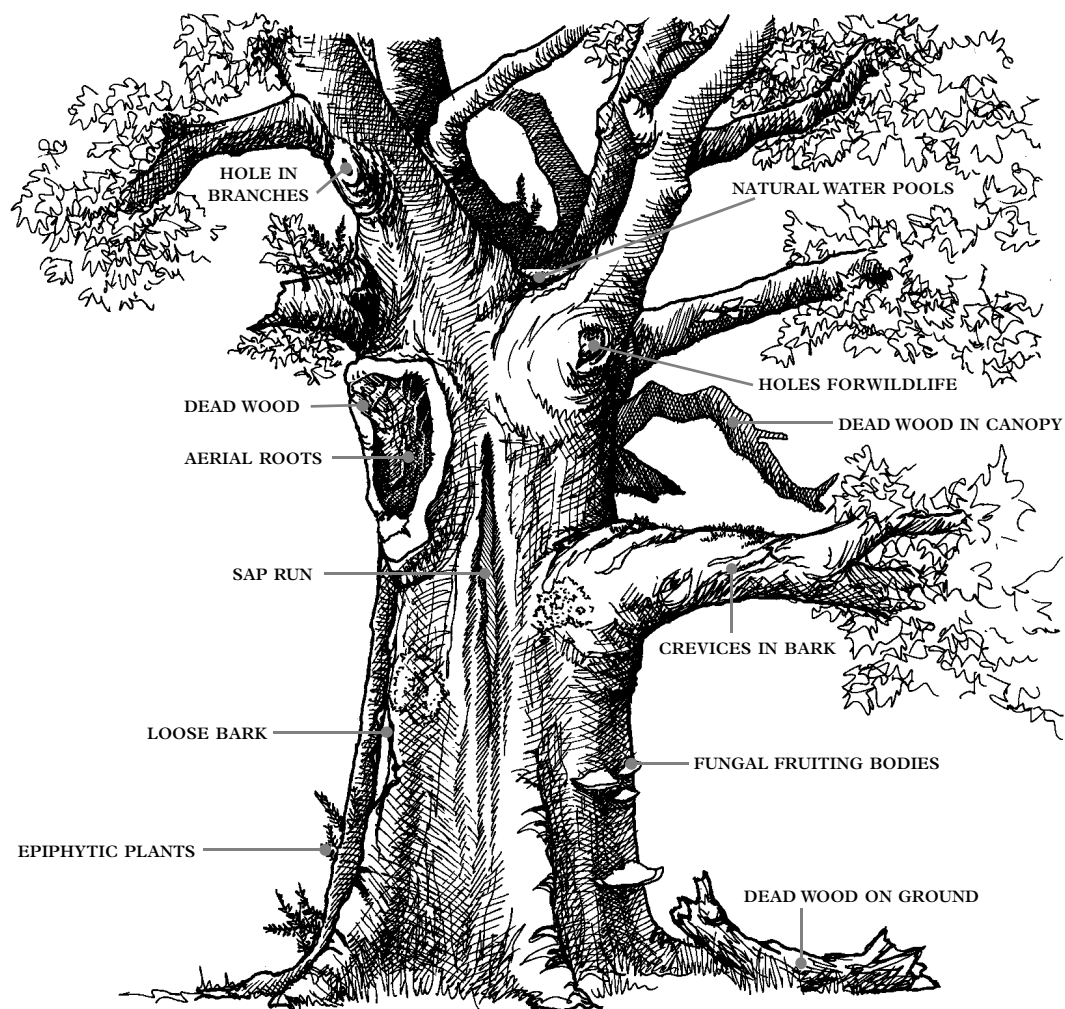
Introduction

Veteran trees often provide a range of rich but scarce habitats supporting many rare and endangered species, and are an irreplaceable part of England's landscape and biological heritage. Ancient trees in England represent a very high proportion of the Northern European veteran tree population. Therefore owners and managers have a particular responsibility for their stewardship. Many veteran trees and the fragile habitats they support are under threat from inappropriate management, often resulting from changes in the use of surrounding land. However, there has also been considerable loss of veteran tree habitat due to ill-informed safety management. The conservation and continuity of old trees in the landscape depends on better informed management, which takes into account their intrinsic values as well as the legal implications of ownership.

What is a veteran tree?

When a tree trunk is seen in cross-section, a series of concentric rings are visible, which comprise annual increments of new wood. Up to full-maturity and under favourable conditions, the cross-sectional area of individual rings tends to increase year by year; when this area begins to decrease consistently, the tree is at the veteran stage. This stage can be the longest period in the life of some tree species. A veteran tree is usually old having survived longer in relation to others of the same species.

Diagram to show the features characteristic of a veteran tree.



The important features of a veteran tree

During the ageing process and through the activity of wood digesting organisms, the tree progressively develops features such as hollowing, dead wood, water pools and rot. The tree is gradually transformed into a complex of habitats with often unique combinations of niches for many species, established sometimes over many centuries (see Appendix 1). The natural tendency to lose branches, to hollow and decay may initiate an adaptive growth process in the tree to compensate for potential weaknesses in wood strength which may appear as a localised deformation i.e. a change in the shape of the trunk or branch.

What risks might these features pose?

Some features and deformations are commonly described as 'defects'; a term that implies a fault or mechanical weakness representing an increased risk of failure. Where wood strength or structural integrity is compromised, trees may compensate for these weaknesses or even strengthen the structure by adaptive growth, which is triggered by the defect in mechanical structure, (such as loss of wood strength due to decay). However, adaptive growth is not in itself necessarily a structural defect. All features and deformations therefore require informed assessment to establish whether or not they constitute defects with significant potential for failure.

A new way of looking at 'defects' in trees

Research in the fields of tree biology, tree pathology and bio-mechanics has variously contributed to an enhanced understanding of the ageing process in trees and the natural growth responses to wounding and mechanical stress, giving new insights into the properties of wood in living trees. In addition, the principles of mechanical failure of materials and structures have been applied to trees, providing scientific criteria to help determine how and why trees fail. This advance has led to a significant re-appraisal of the role of decay in tree failure, resulting in improved methods of prediction. Together these developments have greatly improved the identification and evaluation of tree hazards and informed new techniques to sustain veteran trees and their values.

Old trees are not necessarily more prone to failure than younger trees

While defects may be increasingly present with age, many hollow old trees with rot and deadwood have survived gales and storms with only minor branch failure, whereas nearby younger trees, without apparent defects, have lost major branches, snapped or blown over. This is, in part, due to the tendency for older trees to have thicker, shorter trunks, with low broad crowns, or crowns with reduced wind resistance or branch weight. These and other features represent survival strategies that enable trees to become veterans and contribute to their longevity.

A tree may break irrespective of age, and hazards need to be addressed in all trees where mechanical failure may result in harm. By identifying those hazards which pose unacceptable levels of risk, and managing that risk (not necessarily by remedial action to the tree), the conservation of the cultural, landscape and habitat values of veteran trees does not have to be at the expense of safety.

Providing conservation and amenity values are built into the overall management objectives and policy, they need not be threatened when undertaking risk management.

Responsibility for trees

The legal framework

The law relating to trees is complex having developed over many centuries. The most important situations in which the law has a significant role to play are as follows:

- avoidance of harm to those occupying or visiting land, arising as a result of trees growing there;
- avoidance of harm to people or buildings (particularly to foundations), arising as a result of trees on neighbouring land,
- avoidance of harm to those on the public highway, being caused by trees on highway land or on neighbouring property,
- regulation of forestry in general, and tree felling in particular.
- protection of trees of special amenity value,
- protection of wildlife species and their habitats.

This section of the guide attempts to draw together some of the more important principles of law which have been laid down by the courts and by Parliament. It is not comprehensive, (see *The law of trees, forests and hedgerows* - Further reading), but does aim to address those aspects which are likely to be encountered most frequently in the context of veteran trees. In particular, it does not go into detail on liability for root damage to property.

The ownership of trees

The law assumes that the owner of a tree is the owner of the lands surrounding the base of its trunk. This is so even if the tree grows in such a way that its roots grow into neighbouring land, or its branches extend above it. Where land is occupied under a lease, the relevant terms (if any) of the lease should be consulted to determine the rights and duties of the freeholder and any tenants or sub-tenants. Special rules apply where land is held under a settlement. Highway authorities are, in practice, generally responsible for trees growing on highway land.

Duty of care

The person responsible for any tree has a duty, known in law as *the duty of care*, to take reasonable care to avoid acts or omissions which he or she can reasonably foresee would be likely to cause harm. The person responsible, although generally referred to in this guide as (for simplicity) the "owner" of the tree, will in practice be the occupier of the land on which it is standing. The occupier is whoever has sufficient control over the land to appreciate the extent of any dangers and to take any action.

Harm might be in the form of people (or property) being hit by or colliding with trees, or parts of them; or slipping, tripping, sliding or falling on ground that is uneven or slippery as a result of a nearby tree (particularly in the case of people with impaired sight or mobility). People, especially children, may climb trees, and fall out of them; and may be poisoned by or suffer an allergic reaction to certain trees. Trees with thorns may also present a danger.

In practice it is never possible to eliminate completely all danger. The law therefore requires simply that the owner of a tree takes all reasonable care

- to identify possible sources of foreseeable danger, and
- to remove them as far as is reasonably possible.

The standard of care required is “that of a prudent non-expert landowner”. However, the courts have accepted that this test sounds more simple than it really is: “it postulates some degree of knowledge on the part of landowners which must necessarily fall short of the knowledge possessed by scientific arboriculturists but which must surely be greater than the knowledge possessed by the ordinary urban observer of trees or even of the countryman not practically concerned with their care”.

This will mean that where there is a risk of harm occurring a tree must be inspected at appropriate intervals to ensure, as far as is possible, that it contains no apparent source of danger (such as a broken branch likely to fall); and any remedial action discovered to be necessary must be carried out promptly. Where the tree owner does not him/herself possess sufficient knowledge, advice should be taken from someone who does. The frequency of carrying out such inspections, and the thoroughness of them, will depend on all the relevant circumstances, including:

- the age, species and condition of the tree,
- the number and frequency of people and vehicles passing by,
- whether, in particular, there are children likely to be put at risk,
- the use and construction type of buildings that may be affected, and
- in the light of the above, the risk of harm being caused.

This means that particular care must be taken where a tree is either actually on or close to land, or becomes close to land (eg through redevelopment) on which there is a public or private road used by vehicles, or a path used by pedestrians, or any other much-used facility, such as a school, car park, a playground, or the garden of a public house. Because there are more people likely to be affected by any breach of the duty of care in such cases, the courts are likely to take a tougher stance. This is particularly so where, for example, a tree (if it fell) would be likely to injure the users of a busy main road rather than a little used footpath.

It is important to retain a record of the inspections and work that has been carried out, for use in case of any subsequent disputes.

Other factors

The personal circumstances of the tree owner will also be relevant. For example, a person who has recently purchased a piece of land will not be expected, within the first week of taking possession, to deal with all obviously hazardous trees which might cause harm. On a large estate, where there are many such trees, the owner will be expected first to deal with those bordering highways and other high risk areas.

Where the likely risk of harm is very small, and the cost of remedial action very great, it may be reasonable to take no further action. It remains sensible for an owner to consider the possibility of taking action, and to have a written safety policy containing a formal statement that he or she has decided that the risk is sufficiently small that further action is not considered appropriate. However, if there remains substantial doubt, it is better to remove or reduce any significant source of danger. Felling a tree is likely to be necessary only in extreme cases; in most situations, other action will be sufficient to lessen the danger, and thus render the land reasonably safe.

In considering what is reasonable, it is appropriate to take into account broader issues such as whether the tree has particular amenity value either in itself, or as a habitat for wildlife. This is likely to be particularly significant in the case of veteran trees, and those providing a habitat for protected species. Safety obviously takes precedence over amenity in general; but that does not mean that potentially dangerous trees must necessarily be felled. There may well be other possible actions that will eliminate or sufficiently reduce the risk.

Owners who for whatever reason are unable to take action promptly should advise anyone known to be at risk so that they can themselves take any necessary action.

Negligence

Where A has a “duty of care” towards B, and fails to take any necessary action, resulting in harm to people, animals or property on the neighbouring land, and if that harm is foreseeable, then that is likely to be categorised as negligence. Those affected would be entitled to sue for damages (financial compensation).

If trees, or branches, fall so as to cause harm, their owners will be liable if they caused the problem -

- by their action, such as incompetent pruning, or destabilising a tree by root severance,
- by their inaction, such as failure to inspect on a reasonably regular basis, or by omitting to remedy a problem that has been drawn to their attention.

It is particularly important for trees close to highways and other high-risk areas to be the subject of a “reasonably careful inspection”; and a failure to do this may render the owner liable to be sued. There would only be liability, however, where a failure to inspect actually leads to harm. So there would be no liability if, for example, harm is caused solely by

- the fall of a tree or branch as a result of a disease or weakness which would not have been visible on a proper examination, or
- exceptionally severe weather.

Conversely, where work is carried out, the owner should take the opportunity to inspect the tree (including any branches that have been removed), and to carry out any further work that is shown to be necessary. Failure to do so may lead to subsequent liability if it can be shown that carrying out such work would have avoided harm or injury. Where works are carried out to a tree, it is also important to consider the longer term consequences. Where branches are cut this may lead to decay and future hazard. Where roots are cut, this may lead to instability and thus in due course cause the tree to fall. Where some trees in a group are removed, this may cause those remaining to be more exposed, and thus more vulnerable to wind throw. In such cases, failure to take appropriate remedial action may render the owner of the tree liable for damages if the fall of the tree or part of it occurs as a result of the works and causes harm.

Duty to those occupying or visiting land

A particular example of the duty of care owed by the owner of a tree is the duty of the occupier of any land (under the Occupiers’ Liability Act 1957) to anyone visiting that land. The duty is to take such care as is reasonable in all the circumstances to ensure that the visitor will be reasonably safe. The occupier will owe a duty to all visitors, and to anyone working or staying on the land. This includes staff, guests, friends, customers, and visiting relations etc as well as casual visitors such as those soliciting donations for charities.

This duty will obviously include reducing as far as reasonably possible the risk of visitors being harmed by any trees on the land. But it does not follow that this means that the occupier necessarily has to carry out works to a tree that poses a risk, let alone fell it. It may, for example, be appropriate to erect signs to warn of potential hazards, although that will only be sufficient if there is some way for the person reading the sign to take avoiding action. Other possible actions include removing a particular branch that might fall or cause obstruction; diverting circulation routes away from potential problems, or designing them so as to lessen the consequences of tree failure.

Occupiers of land should therefore ascertain which trees on their land are likely to affect the safety of lawful visitors etc., and should ensure that they have done everything reasonably possible to ensure that they are adequately safe. Particular care should be given to the safety of children and others with special needs, although the courts will usually assume that they will be accompanied by a guardian or companion if necessary.

Finally, whilst it is possible for the occupier of land to exclude or limit liability under the 1957 Act by means of conditions of entry or by the erection of notices, this cannot exclude liability for the death or injury of those who enter the land in connection with the business of the occupier. So, for example, if the owner of a leisure attraction charges an entry fee, it cannot avoid liability simply by stating on the ticket that liability for injury is excluded. Whereas a farmer who freely allows someone to walk across his farm may be able to exclude liability by erecting a sign warning of danger.

Trespassers

Trespassers are also to be protected (under the Occupiers’ Liability Act 1984) - but only from risks of which the occupier is aware. Trees that are not likely to affect lawful visitors do not therefore need to be inspected. Consideration must still be given to whether there are any known risks that should be removed or reduced (such as a weak branch known to be regularly climbed by school children entering as trespassers). The same duty applies to the public using land in National Parks under access agreements.

Trees and neighbouring land

Trees frequently grow on or near property boundaries. The general common law rules of negligence apply so that the owner of a tree has a duty of care to ensure that it does not cause harm to people or property on neighbouring land.

In addition, the roots of a tree that is close to the boundary of a plot of land (owned by A) may encroach into the soil of a neighbouring plot (owned by B), or its branches into the airspace above that neighbouring plot. Such encroachment is known in law as nuisance. Where it occurs, B has an automatic right to remove the roots in his/her soil, and the branches in his or her airspace - without giving prior warning to A, the owner of the tree. This is known as abating a nuisance, and may take place whether or not the tree is actually causing any immediate harm. Any branches (including any fruit) or roots that are removed must be offered back to their owner.

In general, the occupier of B’s plot is responsible for the safety of those on his/her land; and that will include ensuring that any branches overhanging from trees on A’s land do not constitute a risk to them. However,

the occupier of B's plot also has a duty of care towards A, and therefore must not exercise his/her common law right of abatement in such a way as to cause harm to A, for example by causing a tree to become unstable.

If the tree is causing immediate harm to the "enjoyment" of the neighbouring land - for example, by shading crops or damaging foundations, then it may be possible for the affected landowner to seek damages (financial compensation) from the tree owner. Alternatively they may seek an injunction to have the offending branches or roots removed.

In particular, care must be taken where a tree is close to neighbouring land on which there are buildings, drains, or other structures, as they may be damaged by the growth of roots. There have been many successful claims for damages in such situations but this is unlikely to be a significant issue with veteran trees. Problems can also arise where a tree is removed, leading to ground movement and consequential damage to nearby foundations.

Finally, where a tree (such as yew) is poisonous to animals or (less commonly) to humans, its owner must ensure that its branches are not allowed to grow over neighbouring land where any poisonous parts may be eaten. Neither must pruned branches or clippings be left where they could be eaten.

Trees and the highway

The above considerations apply equally where a tree is close to neighbouring land on which there is a public highway (such as a road used by vehicles or a path used by pedestrians). The owner of such a tree owes a duty of care to those using the highway.

Unlike the situation between neighbours, where a tree encroaches onto highway land, there is no general right to abate the resulting nuisance, providing it is not obstructing the right of the public to pass by. Where a tree does constitute an obstruction, however, the highway authority can require its owner to remove the obstruction and, if necessary, carry out the necessary works itself at the owner's expense.

Trees that are actually on highway land are almost always presumed to be the responsibility of the highway authority, regardless of when they were planted, and regardless of the strict position in law as to ownership. The authority thus has the duty to ensure that no tree on highway land constitutes a danger to users of the highway. That will involve taking appropriate action when it is required, and in particular inspecting trees as appropriate: more or less frequently, depending on the location and species of the tree and the nature of the highway, and by means of a climbing inspection if necessary.

Further, the authority must ensure that trees on highway land do not grow so as to become a nuisance to the occupiers of adjoining properties - either by virtue of overhanging branches or by roots affecting foundations. The latter problem in particular has led to much litigation. Here, too, the key to avoiding liability may be regular inspection - both of trees and of buildings likely to be affected. However, this is far less likely to be a problem with veteran trees.

Works to trees

When carrying out any works to trees, either in respect of the rights and duties mentioned above or for any other reason, care must be taken to ensure that no harm is caused to any persons, animals or property. Such harm may be direct (where, for example, a branch is lopped and hits someone on the ground) or indirect (such as where work is carried out that leads to the tree being destabilised, requiring it to be removed later). If any harm is caused, and is found to have been foreseeable, those affected may be able to sue for damages. Before carrying out any works to a tree, the local planning authority should be consulted to see if it is subject to a Tree Preservation Order or if it is within a conservation area. In either case, the owner of the land should have been informed when the order was made or the area designated, or as a part of the conveyancing process when s/he bought the land. If there is a preservation order on the tree, it will be necessary to apply for consent from the authority for most works to it; and if it is in a conservation area, the authority must be given six weeks notice.

Consent is not needed where the tree is dead, dying or dangerous, or so far as is necessary to abate a nuisance (see above); and there are other minor exemptions, for details of which the council should be consulted. Where consent is required, the authority should reach a decision principally on the basis of the amenity value of the tree. If consent is refused, there is a right of appeal to the Secretary of State. If work is carried out without the necessary consent, (or without notice having been given), the council will be able to prosecute anyone responsible, with a potentially unlimited fine on conviction. See *Protected trees - a guide to tree preservation procedures*. - Further reading.

Permission from the local planning authority may be required to remove a countryside hedgerow and if any trees are growing in it they are considered to form part of the hedgerow. There are situations where permission is not needed, but removing a hedgerow without permission may result in an unlimited fine. See *The hedgerow regulations - your questions answered* - Further reading.

Where a substantial quantity of timber is to be felled (more than 5 cubic metres in a calendar quarter), a felling licence may be required from the Forestry Commission. Again, there are exemptions and the

carrying out of unauthorised works constitutes a criminal offence. See *Tree felling: getting permission* - Further reading.

Certain species are protected by law, and harming or destroying them, their nests, roosts or their habitats is a criminal offence. If works are proposed to a tree that forms a habitat for wildlife, nesting sites for birds or a home for other plants, any of which are protected, English Nature, or other statutory or advisory bodies should be consulted. If a tree is known to support, or suspected of supporting, bats, then English Nature (or other statutory nature conservation organisation) must be consulted. See *Focus on bats* - Further reading. Consent from English Nature will be required if the tree is within a Site of Special Scientific Interest (SSSI). See *What you should know about Sites of Special Scientific Interest*. - Further reading.

Both the person doing the work and (in most cases) the owner of the tree may be prosecuted if an offence has been committed. To avoid such possibility, each should find out whether additional statutory controls apply to the trees or their associated wildlife and ensure that all necessary consultations have been done and consents received, before starting work.

Conclusion

The law does not require, or expect the impossible. In this area as in many others, there has to be a balance between the interests of the owners of trees, those of the people who may be harmed by trees, and those of the general public. The duty on owners is not to take every possible step to achieve perfect safety - that would inevitably lead to almost every tree being felled. It is rather, to take all reasonable care to ensure that people are reasonably safe. What is "reasonable" must ultimately, be a matter of judgement both for the owners and for their professional advisers.

Management of tree risk

Terms commonly used in the evaluation of tree related hazards

Harm refers to personal injury or damage to property.

A **hazard** is a situation or condition with potential to cause harm in particular circumstances. Through informed observation, it is possible to predict the likelihood that a particular hazard will result in actual harm. The calculation of the probable circumstances in which this might occur is in essence a **risk assessment**.

A **tree-related hazard** is the potential for a part of a tree, (such as branch, trunk or the entire tree) to cause harm. A **target** is that which may be harmed. The **target area** is the area within falling distance of a tree. Whilst a tree or its parts may break and fall, it will not cause harm unless a target is present.

A **target zone** is an area classified by target value and or frequency of use to give a notional range of risk from high to low. The characteristics of targets, their value, frequency and vulnerability have implications for risk.

A **tree risk assessment** establishes the probability that harm might result from a particular tree hazard within a stated period. This considers the likelihood of tree failure occurring when a target is present, within the falling distance of the tree. The assessment may be quantified as a probability or ratio (e.g. 1 in 10) or may be ranked as a level of likelihood (eg very low to very high). Such an assessment provides the means to prioritise action to manage risk.

Safety policy

The number of trees for which an owner is responsible will vary enormously as will the means available for their management. This guidance offers a framework to enable all owners of trees to gauge the need to have an explicit or implicit safety policy and the degree of detail required. There is a clear duty to ensure the reasonable safety of others and an owner will be assisted in fulfilling this duty by understanding the risks posed by his/her trees and making explicit the means by which it is intended to manage them. This process will also involve balancing the values placed on the trees with their associated risks. The process of tree risk assessment therefore includes the consideration of factors such as associated habitats, and visual and other amenities.

The principles guiding prudent management for amenity and safety form the basis of a safety policy. In the event of an accident occurring, which results in injury, an owner may be required to demonstrate that s/he has acted reasonably in relation to the management of risk. It may not be sufficient that routine inspections have resulted in tree work being undertaken to reduce the risk of tree failure. Records of inspections, tree surgery and other work will be required. By fulfilling the elements of an adequate and appropriate safety policy, owners will more readily be able to demonstrate that they are complying with their obligations.

A site may be important for a range of historic, landscape or wildlife features. As zero risk is not a societal expectation, it is reasonable to expect that these valued features will be retained, albeit with specific management requirements for the maintenance of adequate safety

The following is an example of a safety policy aim applied to a National Nature Reserve in the south of England, containing a large number of important veteran trees:

“The tree safety inspection process should not lead to the loss of character or species diversity, rather it should assist the management process ensuring that a reasonable balance is maintained between conservation and safety, risk and public access.”

A policy aim stating that safety should be balanced with habitat should focus on the management of the tree in relation to possible targets. This should ensure that safety measures involving loss of habitat are implemented only when essential to manage risk. When amenity and wildlife value is high, it may be reasonable to accept a higher level of risk than would apply in most other cases where there is a tendency to err in favour of providing a more than adequate safety margin, thus employing cost/benefit evaluation. Acceptance of higher risk may necessitate increased levels of inspection and management. In such cases increased resources may be required for management and/ or special measures may need to be taken to inform whoever may be placed at risk as a result of the owner’s multiple objectives for the site eg. by means of warning or interpretative signs provided at appropriate locations.

A safety policy needs to be able to demonstrate:

- awareness of hazards, risks and legal obligations
- awareness of the social, amenity or environmental factors that are valued and which may have a bearing on safety
- the decision process and how it is implemented
- recording, monitoring and feedback.

Defining aims and objectives

For sites where veteran trees are valued for their historic, landscape and biological importance, the continuity of wildlife habitat is one of the fundamental issues. In such sites, it may be reasonable to have a key aim that there should be no avoidable loss of veteran tree habitat. A policy may seek to meet this, for example, with the following objectives:

- to use current best practice to maintain the wildlife and environmental value of the site while meeting obligations in law in respect of duty of care
- always to consider non-tree management options first
- to maintain and enhance the value of deadwood habitat.

These objectives may then result in management which:

- addresses risk by considering target management before work to trees
- does not take the presence of fungal fruiting bodies as an automatic indication of a tree hazard
- retains, wherever feasible, dead trees and trees with dead wood.

Steps for preparing a risk management policy

- Prepare policy aims (eg no avoidable loss of veteran trees)
- Define objectives (eg meet legal obligations and optimise habitat)
- Identify management implications of objectives (assess and classify levels of risk and habitat values)
- Manage target areas surrounding trees
- Manage site and trees to achieve acceptable levels of risk (identify essential remedial works and routine maintenance)
- Define inspection cycle
- Keep records of all inspections, works, monitoring and feedback
- Instruct specialist assessors

Principles of tree risk assessment

Nothing is without risk

We are at risk every day in our own homes, travelling to work and in the workplace. We expect to take risks, and the law requires only that we should be guarded from risks that are unreasonable. Absolute safety or the eradication of all risk is not expected and arguably is neither possible nor desirable. In the context of tree management, such an approach could result in the loss of all tree associated amenities. By controlling risks from tree hazards, owners are meeting natural and ethical duties for the safety of others. They are also meeting the requirements of insurers and of the law.

The importance of assessing risk

Whether trees are managed for landscape, habitat, commercial or multi-purpose objectives, the legal obligation to ensure the reasonable safety of others remains the same. Owners may be alarmed by court judgements that seem to imply automatic liability for tree failures. However, the law recognises that there is a balance to be struck between the risks and benefits of trees. Owners are required to consider the level of risk associated with a tree and whether it is reasonable to protect against that risk. Their duty is to identify apparent sources of danger and to make land sufficiently safe. Liability is determined on the basis of whether a danger posed by a tree could have been foreseen, and whether reasonable remedies could have been undertaken, which would have reduced risks to an acceptable level.

To meet legal requirements, it is crucial that owners manage risk and can be seen to do so, and are able to provide evidence that this has been done. To manage risk effectively, the risk must first be identified and ranked according to severity, then prioritised for action.

Tree risk assessment - an outline of the process

- Assess target(s)
- Assign target zones to target areas as appropriate
- Determine tree inspection type and priority
- Assess trees for hazard (identify trees needing more detailed inspection)
- Make tree risk assessment (assess the probability that a hazard may result in harm)
- Assign risk categories to trees (low-high) and prioritise management
- Implement management

If management changes the nature of the target or the hazard this should lead to a review of target risk zones and the tree risk category. In addition to intended management changes, site situations and trees are subject to change. This means that tree risk assessment is never a one-off activity but a continuing process with new information feeding back into future tree assessments.

Assessing the target

Almost every tree has the potential to cause harm, although the location of a tree may be so remote that the probability of harm occurring is extremely low. Similarly very young trees represent a negligible risk. As owners are required to take reasonable steps to ensure adequate safety, action is necessary only when there is an identified risk to a target. In evaluating whether such risks are present, targets need to be assessed before tree stability.

A target assessment evaluates the nature of targets in order to predict their frequency of presence within falling distance of the tree (target area), and the extent of possible harm. This assessment takes into consideration factors such as vulnerability to impact. Moving vehicles require special consideration as in addition to the possibility of trees or parts falling onto them, they may hit the fallen parts or other vehicles in taking avoiding action.

The owner/occupier, site agent or manager is likely to have the most detailed knowledge of the usage of the site by visitors (routine and special occasions) and trespassers. Similarly s/he will be likely to be familiar with usage of neighbouring land or adjoining roads and footpaths that may be affected by tree failure. Therefore s/he may be best placed to classify areas by target risk or provide information to others. Estimations or assumptions made regarding the intensity of usage might usefully be recorded.

Target zones

Target zones classify areas according to target value and frequency of use and provide a notional range of risk from high to low (see over). If a site has a significant number of trees with a variety of targets, the use of target zoning can aid decisions on the nature of inspections. Zone classifications are not absolute values that can be compared from one site to another, but provide information to help determine the need for and priority of inspection relevant to a particular site. As the nature of site usage may change, it will be necessary to review these zones periodically.

Examples of target zones and tree inspection level and frequency

Target Zone	Examples of target area	Level of inspection	Frequency of assessment	Level of competence (See Appx 2)
Negligible risk	Remote or inaccessible areas with no or minimal public use and no high value targets	None	Occasional review of requirement	1, 2, 3 & 4
Low risk	Open parkland, fields, roads, footpaths and bridle ways with occasional use and no other high value or vulnerable targets	Informal	Infrequent assessment - eg every three years if required	1, 2, 3 & 4
Medium risk	Open space, gardens, roads, footpaths and bridle ways with moderate use; occasionally used buildings and car parks	Routine	Regular assessment - eg every two years	2, 3 & 4
High risk	Well used assembly points, pedestrian routes, roads, footpaths, and bridle ways; busy buildings and car parks	Detailed	Frequent assessment - eg annual tree inspections	2, 3 & 4

Limits to knowledge - levels of competence of assessors (see Appendix 2)

All assessors need to be aware of their limitations and should consider whether or not they have the necessary competence to carry out a specific task effectively. If in doubt, it is advisable to obtain appropriate specialist advice. In relation to a tree risk assessment, if an assessor is unable to confidently identify obvious external signs of defect and particularly their significance in respect of structural stability in the tree, s/he should consult a specialist.

Assessing the tree

Level of tree inspection

The level of tree inspection is initially determined according to target zone. However, after an inspection programme has been initiated on this basis, trees with apparent or suspected significant hazards may be identified for more detailed assessment. The levels of inspection are summarised below. Those undertaking tree inspections should satisfy themselves as to their ability to carry out a particular level of inspection. Guidance on assessing competence level for those inspecting trees or for anyone commissioning tree inspections is contained in Appendix 2.

Informal - trees are assessed in the normal course of visits through general observation of health and condition, and identification of obvious structural weakness or failure.

Routine - trees are assessed by means of visual assessment from ground level looking for obvious external signs of mechanical defects, which may lead to failure; identification of specific trees requiring more detailed assessment.

Detailed - trees are assessed by means of systematic tree-by-tree visual assessment, initially from ground level looking for external signs of mechanical defects that may lead to failure. Where appropriate, further detailed investigation of potential structural weakness may be needed involving aerial inspections, soil and root condition or other procedures for assessing the nature of decay, wood quality or internal trunk condition.

Tree hazard assessment

A tree hazard assessment considers the nature of the hazard in order to predict the likelihood of mechanical failure and the magnitude or consequences of impact. This includes identifying the cause of expected failure and the size and height above the target of the parts of the tree that may fail. **However, a tree hazard assessment does not necessarily involve the detailed inspection of trees nor does the assessment necessarily need to be carried out by a tree expert.** As in target assessment, certain categories of trees and site conditions may not require inspection as they have negligible risk of failure eg young trees of species not prone to branch breakage or wind-throw. A general assessment of an area of trees by a sufficiently competent person will establish the degree of input required from professionals in relation to tree hazard.

Tree inspections

The inspection detail will depend on the nature of the hazards identified and the circumstances and properties of the target. When a hazard is reduced (eg after lessening the end-weight from a branch), or when circumstances change favourably surrounding trees (eg after re-location of a footpath), the inspection level and frequency may be reduced initially.

Inspections generally take place from ground level, when visibility is clear. The assessment should take note of features on and around the tree that signify that there may be a mechanical weakness with a potential for tree failure. Early autumn before leaf fall is a good time for initial inspections, giving a good view of foliage condition, signs of decline in the canopy and the presence of fungal fruit bodies. Binoculars are helpful for tree inspections and indeed should be used if it is suspected that there may be structural weakness present at a high level, which may be more clearly observed with their use. After leaf fall, views of the entire branch structure are improved. However, summer inspections provide the means to record leaf condition and density. This can give evidence of either decline or recovery in tree health.

Following routine inspections, trees requiring further detailed examination, including determining the proportions of sound and decayed wood and/or aerial inspections should be identified.

External signs of mechanical weaknesses in trees

During tree inspections, the inspector should pay attention to features on and around the tree, which may indicate past failures or the possibility of future failure. The following examples refer to signs of possible structural weakness. The observation of such signs does not automatically imply that there is a weakness. To make the connection between the external sign and a potential hazard requires interpretation based on relevant knowledge and experience. A comprehensive and detailed explanation of the issues involved is set out in *Principles of tree hazard assessment and management*. See Further reading.

Examples of obvious signs indicating presence of hazard

- Extreme weight imbalance on weakened roots, trunk or crown
- Lifting root-plate, extensive root damage or loss
- Extensive cracks and splits
- Extensive decay across large cross-sectional area of trunk or large branch
- External growth patterns indicative of increased loading
- Extensive decay below or around trunk and branch unions
- Broken or hanging limbs
- Weak forks with included bark
- Disease
- Health decline eg small or discoloured leaves, die-back of branches
- Exposure to wind
- Evidence of ground compaction below canopy
- Construction damage
- Fungal fruiting bodies*
- Deadwood**

(* & **see below)

Once observed, external signs need informed evaluation to properly assess their significance in relation to potential tree failure.

Fungi*

The presence of fungi on or around the tree can be an external sign of internal decay but does not automatically indicate probable tree failure. Today there is an improved understanding of the complex role of decay in trees. While some fungi are indeed harmful to trees and may adversely affect tree health and stability, a great many, including many wood decomposers, may be beneficial and even contribute to tree health and longevity. The effect of a specific fungal coloniser on the mechanical strength of a veteran tree may change very considerably over a long period of time. An understanding of how different fungal species colonise and affect wood structure and tree health in different tree species is essential in assessing the significance of fungi once they are observed on or near the tree.

Deadwood**

The failure potential of deadwood varies according to the type of tree and fungal activity. For example, deadwood in oak may be less likely to break than end-loaded live branches and can remain stable for decades. Deadwood in beech, however, is more likely to fail than in oak; knowledge of the attributes of specific species is therefore important. Where deadwood is found in a tree and considered hazardous, treatment options may be similar to that for live wood. Its significance needs informed assessment.

Frequency of tree inspection

The target zone will determine the general tree inspection frequency. However, trees identified as having both very high retention value and very high hazard ratings may require exceptional inspection cycles or types of inspection. Where there are trees with low failure potential in high risk zones, it may be reasonable not to inspect such trees and review them at a future date. If no management of the trees or the targets takes place, the initial zoning will determine the future frequency of tree inspection. If however, management takes place, the risk classification may be altered together with future inspection requirements.

All trees within range of targets may require inspection after severe storms, particularly in medium to high risk zones. Any other circumstance which may give rise to rapid and significant changes in tree condition may also affect frequency of inspection.

Recording

Inspection records should include inspection dates, name of inspector, weather conditions, and presence of factors obscuring potential defects such as ivy growth. The areas of trees inspected alongside roads and footpaths should be clearly marked on accompanying maps or otherwise defined. It is important to record inspections, even if only briefly, to be able to demonstrate that this element of duty of care has been fulfilled. Instructions to carry out work to trees, dates of completion, together with any amendments to tree inspectors' recommendations, should also be recorded.

Records provide the basis for safety management reviews and can, over time, build a valuable historical record of site specific tree failure or non-failure patterns. Once hazards have been assessed or work completed, re-inspection times should be assigned or reviewed and then recorded.

Management

General management

Management options will be guided by the overall aims defined in a policy for the site. The assessment of habitat (see Appendix 1), cultural and historic values of veteran trees will also be needed to inform policy and management decisions. In general, a decision to conserve veteran trees will lead to a management regime that identifies appropriate measures to maintain trees at an acceptable level of safety, whilst balancing landscape and wildlife considerations. This includes target and tree maintenance relevant to exceptional conditions, such as after storms, or before special events close to trees.

Managing the target

In the case of a veteran tree, where a tree risk assessment has identified a situation requiring action, the first consideration should always be to explore ways in which the target can either be removed, separated or directed away from the hazard area, or usage of the area reduced. Whilst removal of targets may be the preferred option, in that it achieves the lowest level of risk, a range of lesser options may still achieve reasonable safety, eg by discouraging public access using 'obstructions' to re-direct pedestrians or vehicles.

The consideration of options might follow the sequence below in descending order of preference.

- | | |
|---|--|
| 1. Move target or keep outside falling distance | = negligible risk |
| 2. Reduce access (use) within falling distance | = reduce likelihood of harm |
| 3. Move target to area of reduced impact eg to crown perimeter | = reduce severity of harm |
| 4. Strengthen target eg replace glass roof with more resilient material | = reduce likelihood and severity of harm |
| 5. Protect vulnerable targets from impact | = reduce severity of harm |

Target separation

Separation may only need to be for a limited time when particular circumstances increase the level of risk. The increase in risk may result from an increased likelihood of tree failure, change in site usage, or a combination of these factors. Weather influences the level of risk by affecting both the likelihood of failure of the tree and of people or vehicles being present. The risk of tree failure may be highest in high winds, heavy rain, snow and ice, but hot or drought conditions may increase the risk of failure in some tree species. General outdoor activity tends to be greatest in fine weather, with an increased tendency for people to remain longer in certain locations to picnic for example, creating seasonal variation in site usage. However, special events, which might be at various times of the year, may massively increase usage but for only a very limited time. All these factors should be taken into account when considering the most appropriate option or combination of options for management.

Target management options

The following measures may reduce risks to acceptable levels by managing the target and minimising the need for tree surgery, which may damage tree habitat or landscape values.

Moving the target from risk zones

- Re-locate moveable features or facilities such as car parks, play equipment, ticket/refreshment kiosks, seats, picnic tables, barbecues, information boards, commemorative plaques, hides, fishing platforms, horse jumps, feeding centres for horses/cattle, fences etc.
- Re-route paths, tracks, construct 'pinch-points' in roads.
- Create mown paths in areas of long grass to direct people away from high risk zones.
- Plan to locate new permanent or temporary structures, assembly points, roads, tracks or paths and other features outside the falling range of trees or at least outside high risk zones.
- Remove obvious routes into areas with hazardous trees, which might otherwise attract children.

Preventing or deterring access to risk zones

- Continuous or discontinuous fence/barrier - the height and construction may only need to be sufficient to discourage access e.g. low post and rail, short logs set vertically in the ground (avoiding root damage); placement of logs or deadwood horizontally, 'dead hedging'.
- Plant or encourage natural growth of nettles, brambles or similar (not bracken which is a fire risk).
- Reduce intensity of ground management - let grass grow, leave branch debris and leaf litter to accumulate.
- Temporary exclusion by closure of all or part of site triggered by specific weather conditions which very significantly increase risk, or in association with organised events which would increase risk.
- Use signs to warn of risks generally or in specific circumstances.
- Change use of area e.g. create wildflower/hay meadow, grazing area, deer park.

The effects of ground works on the risk of tree failure

In planning and implementing any construction work, including excavation for underground services, significant damage to existing trees should be avoided. The *Guide for trees in relation to construction* (BS 5837). (See Further reading) gives guidance for minimum distances for protective fencing around trees. This guidance should be followed with the exception for veteran trees, of the proviso contained in paragraph 7.5.5, permitting a reduction in minimum distance. When installing or maintaining utilities in or near public highways, the advice and minimum requirements in *Guidelines for the planning, installation and maintenance of utility services in proximity to trees* (NJUG 10 see Further reading), should be adhered to. Where space allows, it would be preferable to follow the advice in BS 5837.

Managing the tree

When all target management options have been explored and tree surgery is required to reduce risks to acceptable levels, a range of treatments may be appropriate in the interests of safety and conservation. The simple removal of end-loaded, hazardous entire live or dead limbs may not be appropriate for veteran tree management. Instead weight reduction may be undertaken leaving stubs with fractured ends. This is a habitat and safety solution for trees with a long life expectancy. Management principles for veteran trees are covered in depth in *Veteran Trees: A guide to good management*. See Further reading. It is important that specifications for tree work are provided by someone with a sufficient level of competence to achieve the management objectives. See Appendix 2 *Levels of Competence*.

If tree surgery is required, identify the minimum work necessary to reduce risk to an acceptable level. These treatment options assume a requirement to retain maximum habitat value while addressing the requirements to maintain adequate safety.

Veteran tree work options to consider singly or in combination might include:

- **restoration** : - crown reduction of lapsed pollards or historic maiden trees liable to failure or collapse. This may involve reduction of the overall crown height and spread (though not entirely to the original pollard point), in stages over an appropriate period of time, for adequate recovery between each stage. This also includes what has been termed re-pollarding.
- **end weight reduction** : - selective reduction to end-loaded heavy limbs at risk of breakage.
- **crown thinning** : - undertaken selectively to reduce wind resistance and end-loading.
- **pole thinning** : - involving the removal of selected pollard stems - a gradual process over a specified time.
- **truncation** : - severe reduction of major stems in extreme cases of structural instability.
- **pruning cuts** : - should be undertaken where appropriate with use of natural fracture techniques or coronet cuts (See *Veteran Trees: A guide to good management* - Further reading).
- **deadwood cutting** : - where deadwood is considered hazardous, it can be reduced in weight by natural fracture techniques or coronet cuts. Entire removal is seldom essential. Usually it is possible to leave a stub with a fractured end which is still of value to wildlife.

CONTINUED OVER

- **deadwood removal**: - only where essential for safety reasons. Where deadwood is removed it should, where possible, be kept on the ground near the parent tree for continuity of habitat.
- **cable/belt/rod bracing** : - may be used to reduce the risk of limb failure or reduce severity of harm in the event of failure. Bracing requires expert installation and future adjustment and maintenance as otherwise it may increase the risk of failure rather than alleviating it.
- **propping** : - may be used to prevent limb failure but may need future adjustment and maintenance. This can sometimes lead to further instability rather than alleviating it. It may also reduce severity of harm from limb failure.
- **dead trunks** : - if upright and stable, trunks should be retained (i.e. as upright poles at an appropriate height with most of the branch framework reduced to stubs).
- **felling** : - should be considered as a last resort after taking into consideration all other options. Even when specified, dead trunks can usually be retained as 'monoliths'. Felled trees and trunks should be retained locally on the ground.

Insurance

As stated elsewhere, the elimination of all risk is not possible. Even if all the advice and guidance contained in this booklet is followed, risk will remain. Very violent storms and unpredictable events or combinations of events will result in tree failures leading to harm. As in other spheres of life, insurance provides for that eventuality. All owners are advised to have insurance appropriate to their circumstances and to ensure that anyone who advises them on, or does work to, trees is appropriately and adequately insured.

Conclusion

These guidelines have brought together in a single document the basic principles of the law relating to responsibility for harm from tree failure and set out the process by which those responsibilities can be fulfilled in a way that take account of safety and conservation of the value of veteran trees. The guidance is intended to give owners the tools and the confidence to achieve those aims. It is hoped that those who have the stewardship of veteran trees will take this advice into consideration in their future management. A summary of risk management processes is provided in Appendix 3.

Appendix 1 Habitat Assessment

A simple recording form for habitat assessment is available from English Nature.

Identify the importance of features on a tree, which may be occupied by veteran tree dependant species (termed associates), through the following steps: -

1. Identify tree features with potential for colonisation by tree associates
2. Determine the presence of associates from observing signs, and own knowledge
3. Identify the associates or seek specialist assistance
4. Evaluate and rate importance of habitat from very high to low
5. Seek further advice if either a) habitat is considered to have high value or b) there is uncertainty of the habitat value

Tree features indicative of high value

Hollows	hollow areas of trunk or main branches (>150mm)
Holes	small holes in trunk and branches (<150mm)
Water pockets	water filled tree pools on tree or roots
Rot	red, brown or white
Deadwood	large amounts of deadwood in crown or on ground
Bark	sap stains, loose old thick bark
Broken branch stubs	live branches which have broken with shattered ends
Splits in trunk or branch	wood fibre separation
Runs of sap/other stains	wet exudates from the surface of the bark, wounds, holes or 'fluxes'
Bore exit holes	from insect tunnelling with dry powdery residues (frass)

Species which may be associated with veteran trees

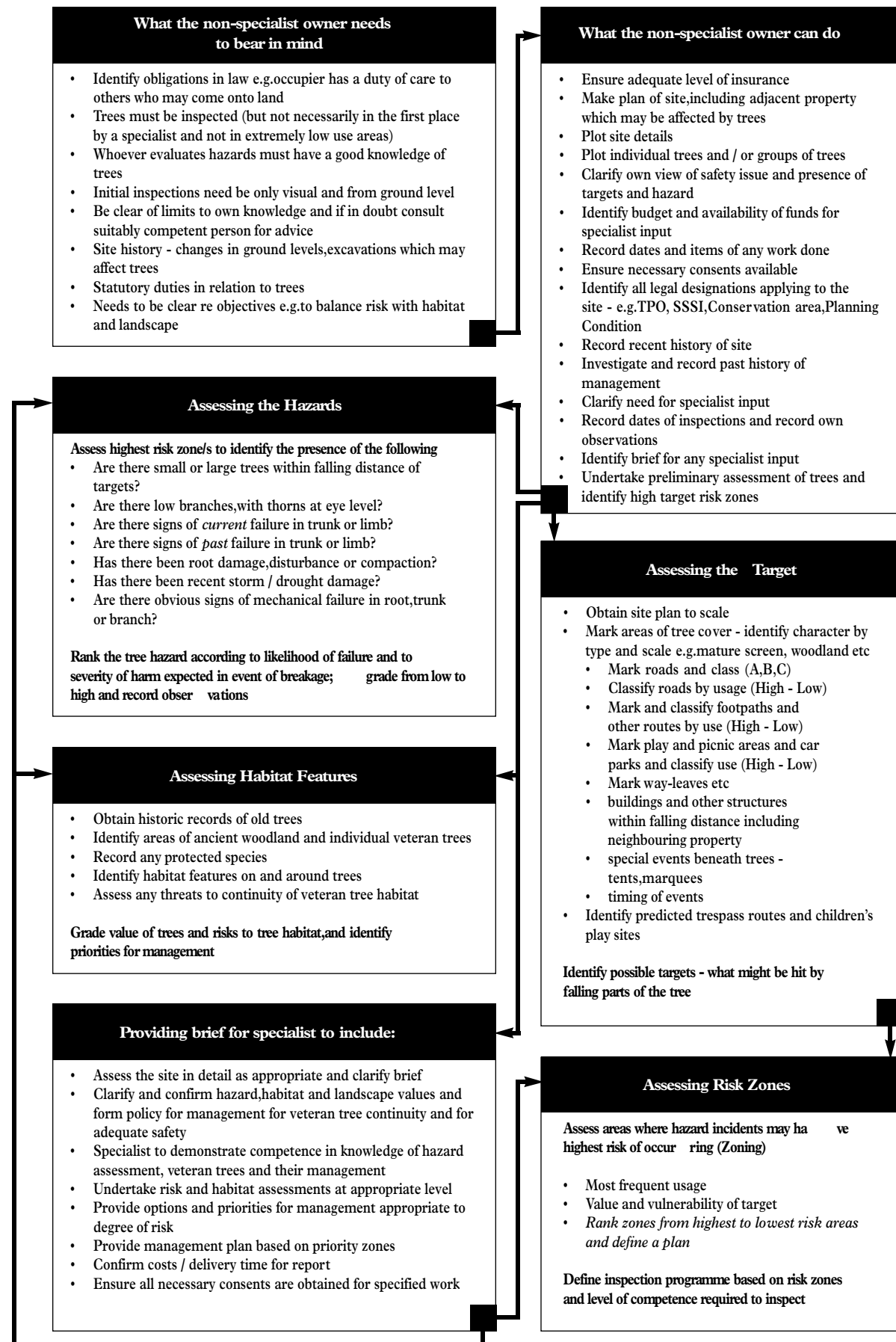
Fungi:	bracket fungi, toadstools with cap and stalk, skin-like covering
Invertebrates:	beetles, hoverflies, spiders, millipedes etc
Birds:	large birds occupying cavities or nesting birds
Mammals:	bats, rodents
Reptiles:	snakes or lizards under loose bark
Plants and epiphytes:	lichens, ferns, polypody, ivy, moss etc

Appendix 2 Levels of competence*

Level	A Site & Target Assessment	B Hazard & Habitat Assessment	C Management Assessment	D Tasks
1 No general tree knowledge Owner Estate worker Tree Warden Volunteer	i) Identify targets, their values and vulnerability, frequency of presence. ii) Knowledge of local site conditions, weather, tree failure history, wildlife.	Estimate:- Trees within falling distance of targets Tree size and height above target Identify obvious visible failure eg broken branch, rocking root plate. Identify possible tree-dependent species.	Options for target management. Removal of hanging, fallen or obstructing branches from paths & highways and ensure visibility of signs, street lights, vehicles etc.	Site assessment including preliminary target assessment. Assign trees to broad age & size categories. Identify and report trees with obvious existing failures to competent specialist.
2 Good general tree knowledge Forestry worker Woodlands Officer	As A1(i) above, plus: (ii) special assessment of site conditions, weather, tree failure history & wildlife by observation at time of inspection from experience and general knowledge.	As B1 above, plus: Identify tree species, and recognise normal appearance and growth for locality & visible signs of ill health. Recognise obvious external signs of potential structural weakness.	As C1 above	Categorise trees by age class, species & general condition. Assess general tree condition. Identify, evaluate and report on obvious defects and likely harm from failure.
3 General tree specialist Arborist Forester	As A1(i) & A2(ii) above	As B1 & B2 above, plus: Identify non-obvious external signs of potential structural weakness in non-veteran trees. Detailed inspection.	As C1 above, plus: Detailed tree work specification.	Detailed tree inspections. Identify and evaluate defects - tree risk assessment. Tree management advice.
4 Veteran tree specialist with veteran tree knowledge Arborist Forester	As A1(i) & A2(ii) above, plus: Assess general tree habitat values and threats.	As B1, B2 & B3 above, plus: Non-obvious external signs of weakness in veteran trees. Identify tree-dependent species and their values.	As C1 & C3 above, plus: Detailed tree work specification and techniques appropriate to veteran trees.	As D3 above, plus: Identify and evaluate defects and risk in veteran trees. Tree management advice to retain veteran values. Habitat assessment.
5 Habitat specialist	As A1(i) above, plus: Assess detailed site habitat values and threats.	As B1 & B2 above (if trained), plus: Detailed assessment of species and habitat significance and value.	As C1 above, plus: Define specific management priorities for tree and site habitat conservation.	As D1 & D2 above (if trained), plus: Detailed tree and site habitat assessment and management.

*These descriptions are based on **minimum** levels of knowledge expected of each class of person; individuals may have more.

Appendix 3 Summary of risk management processes



Further Advice & Information

Further Reading

References referred to in the text

- BRITISH STANDARDS INSTITUTION. 1991. *Guide for trees in relation to construction*. London: British Standards Institution (BS 5837).
- DEPARTMENT OF THE ENVIRONMENT. 1997. *The hedgerow regulations - your questions answered*. London: Department of the Environment.
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Other useful references

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- STROUTS, R.G. & WINTER, T.G. 1994. *Diagnosis of ill-health in trees*. London: HMSO (Research for Amenity Trees 2).

Organisations able to provide advice

- Arboricultural Association**
Directories of registered arboricultural consultants and approved arboricultural contractors.
Brief advice and information notes.
- Arboricultural Advisor y and Information Service (AAIS)**
Brief advice and information notes.
Advice help line on general arboriculture.

Local Authority

Advice on tree preservation orders, conservation area and planning conditions and procedure for consents.
May have arboricultural, forestry or woodland officers able to advise on tree management or ecologists able to advise on habitat management.

English Nature

Advice on wildlife and SSSI consultation/consents.

Forestry Commission

Advice on Felling Licences (Edinburgh).

Disease and Diagnostic and Advisory Service (Farnham).

Addresses for publications and advice

Arboricultural Advisor y and Information Service

Alice Holt Lodge, Wrecclesham, Farnham, Surrey, GU10 4LH
Tree Helpline 09065 161147 (calls to the Tree Helpline cost £1.50 per minute)
Administration Tel: 01420 22022, Fax: 01420 22000,
e-mail: admin@treeadvice.co.uk, <http://www.treeadvice.co.uk>

Arboricultural Association,

Ampfield House, Ampfield, Romsey, Hampshire SO51 9PA
Tel: 01794 368717, Fax: 01794 368978,
e-mail: treehouse@dial.pipex.com, <http://dial.pipex.com/treehouse>

British Standards Institute

389 Chiswick High Road London W4 4AL
Tel: 020 8996 9000 Fax: 020 8996 7400

Country Landowners' Association

16 Belgrave Square, London SW1X 8PQ
Tel: 020 7235 0511, Fax: 020 7235 4696, <http://www.cla.org.uk>

Department of the Environment, Transport and the Regions (DETR)

Eland House, Bressenden Place, London SW1E 5DU
General advice on tree preservation orders, conservation areas and hedgerow regulations:
Tel: 020 7890 5623.
e-mail: RDD4_trees@detr.gsi.gov.uk
Free Literature: Tel: 0870 122 6236. Fax: 0870 122 6237

English Nature

Northminster House, Peterborough PE1 1UA
Tel: 01733 455000, Fax: 01733 568834
Enquiries and free publications: Tel: 01733 455100, Fax: 01733 455103.
E-mail: enquiries@english-nature.org.uk
<http://www.english-nature.org.uk>

Priced publications including: Read, H. 2000. *Veteran Trees: A guide to good management*. available at £15 (incl p&p) from Telelink Ltd, P.O. Box 100, Fareham, Hampshire PO14 2SX,
Tel: 01329 331300, Fax: 01329 330034,
e-mail reception@telelink.co.uk

Forestry Commission

231 Corstorphine Road, Edinburgh EH12 7AT
Tel: 0131 334 0303, Fax: 0131 316 4891, <http://www.forestry.gov.uk>

Publication: *Tree felling: getting permission*, from address above or local conservancy offices

Other publications: Tel: 01329 331345, Fax 01329 330034,
e-mail: reception@telelink.co.uk
By post Forestry Commission, PO Box 100, Fareham, Hampshire, PO14 2SX
Grants and Licences Advice Tel: 0131 314 6324
Disease Diagnostic and Advisory Service Tel: 01420 22255, Fax: 01420 23653

HMSO/TSO

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Fax orders 0870 600 5533. Also from The Stationery Office Bookshops and good booksellers.



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