Tree Risk Management Procedure

December 2024

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1. Scope

This guidance document has been drafted to enable the county council to improve its procedures with regards the cyclical safety inspection of trees across the entirety of the county council's estate, including trees on or adjacent to the highway, trees within countryside sites and trees on operational sites.

This document:

- covers planned and detailed tree inspections

- seeks to ensure that all Highway Safety Inspectors (HSI) and appropriate officers and operatives receive basic tree hazard awareness training

- seeks to ensure that those trees within falling distance of footways/carriageways are included in the Highway Safety Inspection regime

- seeks to ensure that records of all tree defects identified by the Highway Safety Inspection regime will be forwarded onto the tree management team for further investigation

It is considered that this guidance being followed will enable the county council to mitigate risks of injury due to falling trees to as low a level as is reasonably practicable by reducing the risk of :-

- personal injury through falling trees and falling branches
- personal injury through trips and falls on footways disturbed by tree roots

We have produced a number of supplementary guidance documents dealing with General Tree Information, Third Party Trees and Tree Nuisance which can be found on the Highway Asset Management webpage at :-

http://www.lancashire.gov.uk/council/strategies-policies-plans/roads-parking-and-travel/highway-asset-management-in-lancashire/codes-of-practice/tree-safety/

2. Introduction

In drafting this document reference has been made to:-

- The National Tree Safety Group 'Common Sense Risk Management of Trees'
- The Highways Act 1980,
- The Occupier's Liability Act 1984
- Town and Country Planning Act 1990,
- Health and Safety Executive Guidance on 'Management of the Risk from Falling Trees or Branches'

Trees by their nature are dynamic living systems. They have evolved to cope with losing limbs, breaking apart and being wounded and grow adaptively in response to the environment around them. Trees and woodlands can make a significant contribution to quality of life, the local economy and the environment. However, where trees and people co-exist, there is a need to ensure that a tree's natural processes do not pose a risk to the people and property around them.

Owners of trees have a legal duty of care and are obliged to take all reasonable care to ensure that any foreseeable hazards can be identified and made safe. Doing all that is reasonably practicable does not mean that all trees have to be individually examined on a regular basis. The county council is not expected to guarantee that all its trees are safe but is required to take such care as could be expected of a reasonable and prudent tree owner. In addition to managing its own trees, the county council as Highway Authority is also responsible for ensuring that Consent trees (i.e. trees planted within the vehicular highway boundary with our consent by third parties) and Adjoining trees (i.e. trees growing on private land adjacent to the vehicular highway) do not pose a hazard to road users.

The county council supports the view that trees have a social and environmental value and where reasonably practical should be retained and allowed to complete their life cycle with minimal management interventions.

3. Cyclical Tree Safety Inspections

There are two types of tree safety inspections at the county council. Tree surveyors from the tree management team will carry out pedestrian inspections of all trees and groups of trees across the county council's estate. Highway Safety Inspectors will carry out inspections for trees within the highway and trees on adjoining land near the highway as part of their highway safety inspection regimes.

Highway tree safety inspections - These will be carried out by the highways safety inspectors and will usually be pedestrian but in rural locations will typically be inspected from a slow-moving vehicle. Such inspections will involve a limited visual assessment focussing on identifying trees with an imminent and/or probable likelihood of failure by looking for obvious tree safety defects.

The Highway Safety Inspectors will record all tree defects they find in the Highway Safety Inspection Reporting System which automatically passes defect reports to the tree services manager, who will then allocate the USRN to one of the tree surveyors for an inspection.

Where the inspectors observe Highway, Consent or Adjoining trees that are considered to pose an immediate risk to people or property, the tree service manager and/or the Highways Team, depending upon the circumstances, should be contacted immediately for advice or action.

Where trees are considered to be dangerous, we will follow the guidance contained in the General Tree Information guidance document. Where we identify Consent / Adjoining trees with non-urgent/non-dangerous tree defects we will contact the licensee or landowner in line with the guidance contained in our Third-Party Tree Guidance document. These and other tree related documents can be found at:-

http://www.lancashire.gov.uk/council/strategies-policies-plans/roads-parking-and-travel/highway-asset-management-in-lancashire/codes-of-practice/tree-safety/

Tree management team safety inspections - To mitigate the risk of a tree or branch falling and causing injury or damage to as low a level as practically possible the inspection of all trees growing on County Council land growing within falling distance of a vehicular highway and trees within the highway extents will be subject to cyclical inspection every 24 months." Inspections may require entry onto non county council land under S294 Highways Act 1980

Trees on actively operational land regularly used by public or invitees of the county council or county council employees but are outside of falling distance from the vehicular highway will be inspected on a three-year cycle.

Trees on county council owned land not actively operational as above will be inspected on a five-year cycle.

There are approximately 32,000 vehicular highway sections (unique street reference number – USRNs) within the county. These will be screened using aerial photography to discard those which have no trees growing on or within a 20m buffer from them.

It is estimated that there are in the region of 10,000 USRNs which have arboricultural assets and as such will require including within the cyclical inspection schedule. In addition to this there are several hundred operational sites which are owned and managed by the county council and being open to the public and staff members also required screening for trees and then included within the cyclical inspection regime.

The trees will be included into one of three asset types and as such inspections will be made against individual trees, groups and woodland compartments:

Individual tree – A single tree which is distinct from surrounding trees by virtue of size, condition or location.

Groups of trees – Trees occurring collectively but not necessarily in contact or immediate proximity which have common scale and management requirements.

Woodland compartment – Areas of tree cover that cover a greater area than are group and are more complex with features commensurate with a woodland ecosystem.

Before the carrying out an inspection the asset will be registered in an inventory system and attribute (static) data recorded. The static data recorded per asset type being:

Individual tree

- Asset number (auto generated from the inventory system)
- Tag number
- Species
- Life stage
- Zone sensitivity
- Target occupancy

Groups / woodland compartments

- Asset number (auto generated from the inventory system)
- Indicative stem count
- Species mix
- Dominate life stage
- Zone sensitivity
- Target occupancy

The actual tree management team safety inspection (dynamic data) is conducted using the adopted risk matrix which considers the failure potential, damage potential, zone sensitivity and target occupancy of the tree and surrounding area to provide a binary decision regarding whether works are required to reduce the risk posed by the tree.

The tree management team safety inspections will include a series of questions regarding:

- Overall condition – Good, fair, poor or dead
- Significant physiological defects
- Significant structural defects
- Significant pests or diseases

The inspector can override the risk matrix if this indicates that works are not needed to manage the risk from the tree, yet other general maintenance works are required or if the inspector based on their experience and observations feels that risk mitigation works are necessary.

The compliance target for meeting the cyclical inspection frequency is 90% of all USRNs.

Any works which are identified as part of the inspections are triaged based on risk, the inspectors are able to selected from the following time periods based on risk.

- Within 24 hours – Inspector to contact the Operations Engineer and the Tree services manager

- Within 1 month

- Within 6 months

- Within 1 years

- Discretionary (over 12 months) - non risk related maintenance to be carried out when all other risk-based works have been completed and if there are funds left in the budget, such works would likely be considered cosmetic.

Works

Each item of work has its own unique code, referred to in the inventory and works management system as an LA code. The compliance target for completing LA codes within the designated timeframe is set at 85%.

It is expected that the amount of works generated will initially overwhelm the in house arboricultural maintenance provision as legacy and ash die back works cause a temporary spike in demand.This will be managed by procuring external arboricultural services so that time limited tree risk works are delivered within the required timescale.

All works to mitigate or manage risk identified during these inspections will be ordered via the inventory system and will be linked to the tree asset within the asset register. The surveyors will initiate the works and the tree service manager will sense check the proposals, arrange communications if considered necessary (felling notices and

emails to local councillors and amenity / interest groups) and order and allocate the LA code to the tree maintenance team / contractors within the inventory system.

Should further investigations be required regarding canopy stability or internal decay then there is the facility to order either an aerial condition report or decay detection test against the asset within the inventory system.
All inspections and works (LA codes) are attached to the tree asset within the inventory system. Out of cycle (ad-hoc) inspections will also be logged against the asset within the inventory system.

Should a tree be removed then the status of the asset will be update from live to felled once the maintenance contractor has confirmed that the LA code has been completed.

4. Basic Tree Inspection Training

All highways safety inspectors, countryside rangers and area support officers will attend a Lantra (UK land based industries training and skills provider) basic tree inspection course which includes the following essential elements

- State the legal and safety implications of hazardous trees
- Maintain own health and safety while carrying out basic tree inspections
- Recognise hazardous trees
- Determine level of risk
- Decide on an appropriate course of action
- Collect adequate information
- Recognition of own limits

5. Adverse Weather Procedures

After storm events there is a risk that trees may have become subject to partial windthrow or canopy breakages resulting in potentially unstable trees or partially detached limbs.

On or near the highway these would be picked up by the highway safety inspectors or called in by members of the public.

During the storm season (in particular November to March) countryside officers, rangers and volunteer groups will be briefed to be vigilant for storm damage and encouraged to report this to the tree management team and the countryside service manager for action.

When the Met Office issues an amber (potential risk to life) or red weather warning (very likely risk to life) for high winds within Lancashire communications will go out via

LCC media channels strongly urging the public to keep out of wooded sites for the duration of the storm and to be vigilant for storm damage if visiting in the days after a storm event.

As many of the countryside sites have multiple pedestrian entrances is it not logistically possible to physically close countryside service sites with trees and woodlands on them during these times.

6. Risk Matrix

For each survey feature, the surveyor will define, three risk characteristics based on their observations. These three characteristics should describe the same foreseeable tree failure scenario, based on the most likely consequential mode of failure.

Failure Potential	Definition
High	Imminent and likely without remedial action
Medium	Possible under a foreseeable range of conditions
Low	No failure foreseen under normal conditions

Potential Damage is the magnitude of harm that would result from failure. This is defined as the most likely outcome rather than the worst conceivable outcome; a tree that is likely to shed small dead wood which shows no sign of basal decay would therefore be assessed on the basis of the damage caused by falling dead wood rather than total tree failure.

Potential Damage	Definition
Large	Loss of life or serious injury, significant damage to property or obstruction of critical infrastructure
Moderate	Minor physical injury, minor structural damage or obstruction of minor infrastructure
Small	Inconsequential structural impacts

A three-tiered system of zoning is adopted with regards to a feature of sensitivity, these being essentially roads, paths and structures.

Zone Sensitivity	Zone Definition	Justification
High	Less than 10m for a feature of sensitivity	Represents the zone of possible branch drop from a large tree
Medium	Less than 25m for a feature of sensitivity	Represents the zone of possible falling distance for a large tree
Low	More than 25m for a feature of sensitivity	Represents the zone outside both of the other zones

Target occupancy is used to evaluate the likelihood of the most sensitive target being present.

Target Occupancy	Definition
Constant	Permanent occupancy by the most sensitive target of the area that would be affected by the most risky part of the tree (75% - 100% of the time)
Frequent	Regular occupancy by the most sensitive target of the area that would be affected by the most risky part of the tree (25% - 75% of the time)
Intermittent	Occasional occupancy by the most sensitive target of the area that would be affected by the most risky part of the tree (0% - 25% of the time)

Failure potential, potential damage and target occupancy are scored and used to generate the tree risk confidence value.

The threshold for action is the higher of the zone sensitivity and target occupancy values.

RISK MITIGATION WORKS ARE REQUIRED WHERE THE RISK CONFIDENCE IS LOWER THAT THE THRESHOLD FOR ACTION.

Risk Assessment Criteria	System Input	System Value
Failure Potential	High	0.5
	Medium	1
	Low	2
Potential Damage	Large	1
	Moderate	2
	Small	3
Target Occupancy	Constant	2
	Frequent	1
	Intermittent	0.5
Zone Sensitivity	High	1
	Medium	1
	Low	0.5

LOW SENSITIVITY							
Failure Potential	Damage Potential	Target Occupancy	FP System Value	PD System Value	Tree Risk Confidence	Threshold For Action	Works Required
High	Large	Constant	0.5	1	0.5	2	YES
High	Large	Frequent	0.5	1	0.5	1	YES
High	Large	Intermittent	0.5	1	0.5	0.5	NO
High	Moderate	Constant	0.5	2	1	2	YES
High	Moderate	Frequent	0.5	2	1	1	NO
High	Moderate	Intermittent	0.5	1	1	0.5	NO
High	Small	Constant	0.5	3	1.5	2	YES
High	Small	Frequent	0.5	3	1.5	1	NO
High	Small	Intermittent	0.5	3	1.5	0.5	NO
Medium	Large	Constant	1	1	1	2	YES
Medium	Large	Frequent	1	1	1	1	NO
Medium	Large	Intermittent	1	1	1	0.5	NO
Medium	Moderate	Constant	1	2	2	2	NO
Medium	Moderate	Frequent	1	2	2	1	NO
Medium	Moderate	Intermittent	1	2	2	0.5	NO
Medium	Small	Constant	1	3	3	2	NO
Medium	Small	Frequent	1	3	3	2	NO
Medium	Small	Intermittent	1	3	3	0.5	NO
Low	Large	Constant	2	1	2	2	NO
Low	Large	Frequent	2	1	2	1	NO
Low	Large	Intermittent	2	1	2	0.5	NO
Low	Moderate	Constant	2	2	4	2	NO
Low	Moderate	Frequent	2	2	4	1	NO
Low	Moderate	Intermittent	2	2	4	0.5	NO
Low	Small	Constant	2	3	6	2	NO
Low	Small	Frequent	2	3	6	1	NO
Low	Small	Intermittent	2	3	6	0.5	NO

MEDIUM SENSITIVITY

Failure Potential	Damage Potential	Target Occupancy	FP System Value	PD System Value	Tree Risk Confidence	Threshold For Action	Works Required
High	Large	Constant	0.5	1	0.5	2	YES
High	Large	Frequent	0.5	1	0.5	1	YES
High	Large	Intermittent	0.5	1	0.5	1	YES
High	Moderate	Constant	0.5	2	1	2	YES
High	Moderate	Frequent	0.5	2	1	1	NO
High	Moderate	Intermittent	0.5	2	1	1	NO
High	Small	Constant	0.5	3	1.5	2	YES
High	Small	Frequent	0.5	3	1.5	1	NO
High	Small	Intermittent	0.5	3	1.5	1	NO
Medium	Large	Constant	1	1	1	2	YES
Medium	Large	Frequent	1	1	1	1	NO
Medium	Large	Intermittent	1	1	1	1	NO
Medium	Moderate	Constant	1	2	2	2	NO
Medium	Moderate	Frequent	1	2	2	1	NO
Medium	Moderate	Intermittent	1	1	2	1	NO
Medium	Small	Constant	1	3	3	2	NO
Medium	Small	Frequent	1	3	3	1	NO
Medium	Small	Intermittent	1	3	3	1	NO
Low	Large	Constant	2	1	2	2	NO
Low	Large	Frequent	2	1	2	1	NO
Low	Large	Intermittent	2	1	2	1	NO
Low	Moderate	Constant	2	2	4	2	NO
Low	Moderate	Frequent	2	2	4	1	NO
Low	Moderate	Intermittent	2	2	4	1	NO
Low	Small	Constant	2	3	6	2	NO
Low	Small	Frequent	2	3	6	1	NO
Low	Small	Intermittent	2	3	6	1	NO

HIGH SENSITIVITY

Failure Potential	Damage Potential	Target Occupancy	FP System Value	PD System Value	Tree Risk Confidence	Threshold For Action	Works Required
High	Large	Constant	0.5	1	0.5	2	YES
High	Large	Frequent	0.5	1	0.5	2	YES
High	Large	Intermittent	0.5	1	0.5	2	YES
High	Moderate	Constant	0.5	2	1	2	YES
High	Moderate	Frequent	0.5	2	1	2	YES
High	Moderate	Intermittent	0.5	2	1	2	YES
High	Small	Constant	0.5	3	1.5	2	YES
High	Small	Frequent	0.5	3	1.5	2	YES
High	Small	Intermittent	0.5	3	1.5	2	YES
Medium	Large	Constant	1	1	1	2	YES
Medium	Large	Frequent	1	1	1	2	YES
Medium	Large	Intermittent	1	1	1	2	YES
Medium	Moderate	Constant	1	2	2	2	NO
Medium	Moderate	Frequent	1	2	2	2	NO
Medium	Moderate	Intermittent	1	2	2	2	NO
Medium	Small	Constant	1	3	3	2	NO
Medium	Small	Frequent	1	3	3	2	NO
Medium	Small	Intermittent	1	3	3	2	NO
Low	Large	Constant	2	1	2	2	NO
Low	Large	Frequent	2	1	2	2	NO
Low	Large	Intermittent	2	2	2	2	NO
Low	Moderate	Constant	2	2	4	2	NO
Low	Moderate	Frequent	2	2	4	2	NO
Low	Moderate	Intermittent	2	2	4	2	NO
Low	Small	Constant	2	3	6	2	NO
Low	Small	Frequent	2	3	6	2	NO
Low	Small	Intermittent	2	3	6	2	NO