APPROVED BY COUNCIL CABINET
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Newcastle under Lyme Borough Council: Tree Risk Management Strategy (TRMS)

Newcastle Borough Council owns approximately 650 hectares of land and cares for over 115,000 trees. The trees of the Borough Council (hereafter called the council) are highly valued for their importance to Newcastle's landscape, wildlife values and very positive benefits that they provide to the urban climate and people of Newcastle.

Tree Management

Trees are dynamic living organisms that naturally lose branches or fall. The council has a statutory and common law duty to assess and manage risks associated with trees. The duty is established in criminal law under the Health and Safety at Work Act 1974, and in civil law under the Occupiers Liability Act 1957 and 1984. The duty involves the council taking reasonable precautions to remove or reduce risks related to trees and the environment around trees so far as is reasonably practicable.

Throughout the UK there are on average six fatalities which are attributed to falling trees and branches per year. This is generally considered by the health and safety executive to be an acceptable and very low level of overall risk for the population as a whole.

This Tree Risk Management Strategy produced by the council aims to strike a proportionate and balanced approach between the risks and the benefits gained from trees, to make our tree resource as safe and diverse as reasonably practicable. In this way the council will be better placed to demonstrate that it has have fulfilled the Duty of Care and taken all precautions as far as reasonably practicable to avoid risks to the safety of employees and people who use, pass by and neighbour council owned land.

The strategy will enable the council to undertake regular tree inspections and manage the tree population in a proportionate and cost-effective manner, that will assess whether trees for which the council are responsible present a risk to life and or property and provide a framework by which remedial action can be taken where appropriate.

Guidance in Health and Safety Executive (HSE), National Tree Safety Group (NTSG), and Common-sense risk management of trees has been used to ensure a best practice, practical and deliverable approach.

The approach to Tree Safety Management Procedures covers the following essential aspects:

Mandatory requirements:

- Usage zones defined for all council owned sites.
- Inspection of trees must be carried out in accordance with frequency assigned.
- Inspections must be carried out by people with appropriate training/expertise. Provision must be made in council budgets for operatives, officers and managers to complete BTI (Basic Tree Inspection), QTRA (Quantified Tree Risk Assessment) PTI (Professional Tree Inspection), and FdSc Arboriculture and Tree Management.
- Records of staff and consultants training must be kept.
- Where hazards are identified the risk will be assessed (QTRA), recommendations provided and a work priority stated.
- Provision must be made in council budgets for arboriculture inspection (in-house for reactive and routine inspections (all routes)) and specialist consultants (routine inspections (red routes), and where further specialist inspection or investigation is needed (dataset trees)).
- Provision must be made in council budgets to support the council's in-house Arboriculture Team.

- Provision must be made in council budgets to provide arboriculture support through the council's term contractor.
- Records of inspection and remedial work must be kept updated on the council TRMS recording system (currently Ezytreev)

Leased Properties
New leases shall explicitly identify where the responsibility for tree safety management lies. The paragraph in appendix 1 is to be inserted into all new leases.

Usage Zones
Establishing and Mapping our Usage Zones

The programme of tree inspection and management requires a practical approach, whereby most resources need to be directed to areas where there is greatest risk to people and property. It is not possible or practical to inspect every tree.

The approach is to designate usage zones to each site which relate to the intensity of site use based upon up-to-date site knowledge gained by the council going about its general duties, and the likelihood of people being injured, or buildings or other valued property being damaged in the event of failure of all or part of a tree.

Our Tree Inspections: Usage Zones

Usage Zone	**Level of Use**	**Typical examples (determined by local knowledge/council teams)**
1 High These are our Red Routes	Frequent high volume of road traffic or visitor use. High likelihood of visitors staying in the area	Areas in council ownership that are close to busy roads. Railways Major Car Parks Play Areas Trees adjacent to heavily used buildings (Schools etc) Town Centre trees Trees within our Key Parks and Open Spaces Trees adjacent to heavily used footpaths Trees within our main Cemeteries and Crematorium Trees around fishing pools
2 Medium Purple Route	Generally moderate volume of road traffic or public use. Public tend to disperse rather than gather	Woodland with frequently used paths. Footpaths, bridleways, and way marked trails. Trees overhanging private gardens. Trees within Closed Churchyards Known public rights of way including well used desire lines.
3 Low Blue Route	Generally low volume road traffic or public use. Public well dispersed	Woodland with seldom used paths. Trees within low usage areas of open space. Trees around quiet car parks.
4 Very Low Brown Route	Very low level of public use or infrequently used	Arable land, woodland (away from paths)

A site may have split zones, where some areas warrant a higher level of inspection. Zones will reflect normal usage throughout the course of a year.

Over the next 5 years all of the council's sites will be allocated usage zones. These zones and rationale must remain up-to-date and be reviewed at least every two years or following a significant change of use of a site. These decisions will be documented.

Frequency Method and Timing of Inspections

Usage Zone	Frequency of Inspection	Inspection Type
1 High Red	Between one and two years using a *rolling programme	Walk by inspection of every tree looking for obvious defects
2 Medium Purple	Normally every four years	Walk by inspection of all trees on publicly accessible routes, and all trees adjacent to properties (where access is possible) looking for obvious defects
3 Low Blue	Normally every six years	Walk by inspection of all trees on publicly accessible routes, and all trees adjacent to properties (where access is possible) looking for obvious defects
4 Very Low Brown	No inspection required	No inspection required
Post Major Storm/Severe Weather trees	Following named major storms/severe weather	Basic inspection for obvious damage (by foot/bike/vehicle drive by).
Monitored trees	Additional inspections if appropriate	Increased frequency and/or detailed monitoring inspections, often requiring a higher level of expertise (e.g. climbing inspection)
Cable braced trees and/or other artificial supports	Normally two years (within annual rolling programme) for ground-based inspection Aerial inspection every 5 years	Detailed observation of the condition of cables and associated hardware and condition of supporting branches (higher level of expertise)

**Rolling programme allows an extension to a 12-month inspection interval, but not beyond the maximum interval, so that trees shall be inspected at varied times of the season in order that different features can be identified e.g. fungal fruiting bodies in Autumn, sparse crowns in Spring and upper crowns in winter.*

Research in America has shown that younger trees are less likely to fail. Newly planted trees/groups/woodland will be categorised and recorded when stem diameters are greater than 150mm (when measured at 1.5m height). These are expected to be picked up through zoning and programmed site inspections.

Inspections
Inspections shall be carried out by people with the appropriate training and expertise. The council is supporting its tree inspectors in gaining the following accreditations QTRA (Quantified Tree Risk Assessment Registered User), BTI (Basic Tree Inspection Certificate), PTI (Professional Tree Inspection Certificate) and FdSc in Arboriculture and Tree Management. All contractors completing tree inspections will have LANTRA PTI Certificate as a minimum.

All zoned inspections will be completed by staff trained to PTI level as a minimum. Post storm inspections will be completed by staff trained to BTI as a minimum.

Timing of inspections
The best time to inspect trees is during September and October, when fungal fruiting bodies can most easily be identified, however trees inspected in winter can reveal significant structural defects and trees inspected whilst in leaf during summer can give a valuable indication of general health. The frequency of inspection of the Red routes is between one and two years using a rolling programme, this enables inspection visits to take place throughout the seasons to gain a broader overview of tree health.

Post storm major storm/severe weather inspections take place at our main cemeteries and crematorium and major parks as soon as practicable after a storm has occurred.

Monitored Trees
Monitored (re-inspected trees) may be on this list for a short-term whist additional investigation or is being completed or on trees where it is decided to retain them despite having defects that are of some concern (e.g. trees that are considered important enough because of its age, species, location, wildlife or cultural value where defects require monitoring to ensure that the risk that they pose does not become unacceptable), these trees are likely to need more careful and frequent inspection. Such trees may require decisive intervention e.g. complete removal, veteranisation or partial removal. Intervals for these inspections will be on a case-by-case basis, with flexibility in system. Management decisions affecting these trees may require specialist consultancy.

Cable braced trees (or trees requiring other artificial support)
Cable Bracing has been used on a number of council trees over the years. This is a specialist area of arboriculture and should be undertaken only by an arboriculturist with relevant experience and in-depth knowledge of tree anatomy and physiology, and a working knowledge of the engineering principles.

All forms of restraint in a tree shall be inspected at regular interval, the default frequencies for inspections are completed within our annual rolling programme (for ground-based inspections using binoculars) and five-yearly for detailed aerial inspections.

During each inspection the following shall be assessed (ref BS3998:2010):

- *Wear and tear or damage affecting the materials used and their continuing fitness for purpose (eg slippage of wire rope grips, photo-degradation of soft materials or squirrel damage, condition of wooden/metal props)*
  Note: the frequency of inspection of synthetic fibre materials will normally be determined by the manufacturer's recommendations. Some materials will photo-degrade more rapidly than others, and this will have an effect on the safe useful life of the system.

- *Evidence of recent deterioration in the supported or supporting structure(s)*
- *Adverse effects of the attachments of the restraints on the tree (eg chafing or constriction damage)*
- *The presence and extent of decay.*

If the system is found not to be meeting the specified objectives, it should be adjusted, repaired, or replaced as appropriate or alternative management options implemented.

Recording

Accurate recording is essential to enable inspections to be linked back to whole site inspections, routine site inspections, individually recorded defect inspections, reactive inspections, dataset inspections and post storm inspections.

Tree Inspection Records:

- Site maps and Record of Usage Zones.
  Usage Zones to be reviewed at least every two years.

- Whole Site Inspections.
  This demonstrates that all trees (where within red routes), and all trees within the publicly accessible parts of other areas and where our trees are adjacent to properties have been inspected. Site records must include a completed date (date when the whole site had been inspected) inspector name.

- Individually Recorded Inspections
  It is generally only necessary to make a record on an individually inspected tree when hazard is identified, dataset trees, or when a reactive inspection is undertaken (details linking advice given to the council's customer reference number shall be inputted). Where hazards are identified trees will be individually recorded, risk will be assessed (QTRA), recommendations provided, and priority given.

- Post Storm Inspections shall be recorded as a tree set with date and inspector name.

- Dataset Trees
  All dataset trees will be individually recorded. The council keeps up to date records of its dataset trees where an accessible record of all past inspections and management is required- these are trees which require additional resources.

    - Cable Braced trees.
    - Monitored trees (trees requiring additional inspections)
    - Further Investigation trees (e.g. tomography, resistograph, climbing inspections etc)
    - Trees Requiring Ivy Removal to facilitate inspections.

Recording incidents

To monitor and improve our Tree Risk Management procedures it is important to record incidents that the council is aware of, where trees fail or drop significant branches:

- Incidents where trees have fallen or shed limbs where injury, or damage to property has occurred must be reported on the TRMS recording system, Target 100 and to the insurers.

- Incidents where trees have fallen or shed limbs where blockage of highways (where tree team assistance for removal is needed) must be reported on the TRMS recording system and on Target 100.

- Incidents where trees have fallen or shed limbs onto footpaths, highways, public open space causing no injury to people, no damage to property, or no requirement for road closure are to be recorded on the digital TRMS recording system.

- Incidents where trees have fallen or shed limbs within woodland away from footpaths together with weather conditions may be useful in reviewing tree management systems.

Post Major Storm/Severe Weather Inspections
The council will complete inspections following severe weather incidents (for example major storms, tornados).

After major 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. Once severe weather warning has passed, a list of routes will be inspected for obvious damage (by foot/bike/vehicle drive-by). Post major storm routes will be informed by incident recording data and by officer knowledge, rationale to be reviewed and recorded every two years.

The council already install signage in high usage wooded localities. Providing information and interpretation is helpful in increasing public understanding of issues, either at the points of entry or around site. Other ways of providing information (online, website etc) will be considered in future updates of this strategy.

Informal Reporting
Informal reporting can contribute significantly to public safety. The council currently operates a reactive procedure whereby matters can be reported directly through the council's website. This contact is generally received from the general public, Staffordshire County Highways, Network/Services Providers, or grounds managers/operatives. Where necessary reactive site visits are prioritised, and outcomes recorded.

Observation and reporting of tree issues by council operatives is already in place. Streetscene/waste employees report issues as they go about their duties, these staff are a useful resource to us, as they travel hundreds of miles daily throughout the Borough. Toolbox talks and handouts/posters will be used to help support this our process.

Staff who spend considerable amounts of time in our public spaces (for example cemeteries staff, council own tree team and supervisors) shall receive Basic Tree Inspection (BTI) training (one-day training course which could be completed from a council depot). These staff will be a valuable resource in informal reporting and completing our post storm inspections.

Our Risk Control Measures,
The objectives of the control measures are to reduce risks to people from trees as far as reasonably practicable whilst:

- Supporting the council's principle of avoiding pruning and felling of trees unless there is a safety, arboricultural or legal reason or need that can be demonstrated.
- avoiding the unnecessary removal or disfigurement of our trees which could cause environmental, wildlife, landscape or cultural harm.
- conserving habitats that are provided by trees especially those that are old and decaying.

- By ensuring minimal tree operations the amount of carbon that is released is reduced back into the environment from those operations and increases the potential of those trees to sequester more carbon.

The range of measures (although not in order of priority) includes:

- eliminating the hazard, through remedial work, monolithing or felling.
- managing access, by closure (permanent or temporary), path diversion, or signage aimed at managing the flow of pedestrians/vehicles away from the hazard.
- providing information and promoting awareness

Remedial actions

The environmental, cultural, landscape and habitat value of trees should always be considered when deciding on remedial action. Old trees are often uniquely valuable as habitat for wildlife, and even if the physical condition of the tree is poor, remedial action should only be specified where there is a clearly perceptible risk to life or property. This might mean managing user access in the vicinity (for example by re-routing a path), removing part of the tree, or even felling it. Felling should be regarded as a last resort especially for trees with a high ecological value. Where appropriate the council will monolith trees, Monilithic trees are widely accepted as being best industry practice as an alternative to felling. The habitat created is of great conservational value. Trees identified for monolith will be recorded on the council's TRMS recording system.

The appropriate remedial action must be decided by the inspector. Action may include increased frequency of visits and/or further detailed investigations or specified tree works. Further detailed investigations often require a higher level of expertise, these investigations are to be completed by the council's consultant.

Works identified during inspections are prioritised according to need. Remedial action is taken where they present sufficient risk or hazard. The following categories are presently used:

- **Immediate**. Trees which pose an urgent and significant risk shall be dealt with immediately on the best advice available. Public access shall be restricted until the work has been completed.
- **High:** Remedial action must be prioritised and implemented within 6 months or another specified timeframe. Consideration to be given to restricting public access until the work has been completed,
- **Moderate/High:** Remedial action must be prioritised and implemented within 9 months or another specified time frame
- **Moderate** Remedial action must be prioritised and implemented within 18 months or another specified time frame
- **Low-moderate** Feature is not judged to be hazardous before next inspection due. Proactive management may prevent problems developing, or will benefit the tree and improve long-term safety.
- **Low** Proactive management

Work plans

Accurate recording of site inspections is essential to prove all zones have been inspected at the frequency specified for their usage zone, recorded any defects that could pose a reasonably foreseeable risk, and specified and undertaken appropriate remedial action completed through our work plans.

Historically the incomplete transfer of data from our previous (now obsolete) system has led to data that is not representative of the current position. This has caused problems in creating work plans. Significant progress has been made over the last year in checking for inaccuracies

to ensure that a complete and accurate record of the council's tree stock is held, this work will continue to be prioritised.

The TRMS recording system (Ezytreev) data is used to create our work plans and sign off completed work. The system identifies upcoming/overdue inspections as well as works that are due/overdue and provides deadlines by month.

Priorities/performance indicators for the next 5 years
Over the next five years the following priorities will be completed, following this an external audit will be undertaken.

- All of the council Sites are to be zoned and surveyed at 20% per year, to enable full compliance with this strategy by September 2029
- Toolbox talks and handouts to be completed (November 2024) then biannually.
- Leased Sites: Review of leased sites to be completed by October 2027
- Post storm/severe weather routes to be in place by October 2024 to be reviewed biannually (October 2026)
- Red route review to be completed (September 2025) then biannually.
- Cable Braced and artificial restraint trees climbed and checked by September 2024.
- TRMS recording sysytem (Ezytreev) data to be checked for inaccuracies to ensure that a complete record of the council's Tree stock is held in a correct format by July 2029.
- Training is to be delivered at an appropriate level to all inspectors for BTI (Basic Tree Inspection), PTI (Professional Tree Inspection), QTRA and FdSc Arboriculture and Tree Management.

Audits
An internal audit shall be carried out to inform 3-yearly reviews of this strategy. This will help to validate our Tree Risk Management System, highlight any areas for improvement ensuring that it is fit for purpose.

An external audit shall be carried out on a 5 yearly cycle with the aim of ensuring the maintenance of proper records, checking activities are meeting the mandatory rules of operation, performance indicators are being met, monitoring activities that top management cannot itself monitor and pointing out failings in performance that can subsequently be addressed.

Existing and new pests and diseases
Increasing numbers of pests and diseases are attacking the UKs trees, some with devastating consequences (for example Ash Dieback). Outbreaks of disease will be initially monitored through the council's digital TRMS recording system, with consideration given to separate strategy should further inspection/action be needed to manage the impact.

References

Common Sense Risk Management of Trees- Forest Research: ISBN 978-0-85538-840-9

Arboricultural Association Guidance note 7: Tree Surveys- A guide to Good Practice

Tree Safety and Management in the National Trust LJB 18/12/23

Principles of Tree Hazard Assessment and Management: David Lonsdale

Management of the risk from falling trees or branches Health and Safety Executive HSE SIM 01/2007/05

Hart District Council: Tree Risk Management Strategy

High Peak Tree Risk Management Strategy

National Tree Safety Group (NTSG) Managing trees for safety

NTSG (National Tree Safety Group) Common sense risk management of trees

Forest Research: Common sense risk management of trees - landowner summary

Southampton City Council: STORMS operating principles standards

Decision making for arborists: How to get it right and sleep tight on windy nights: Jeremy Barrell

American National Library of medicine: Understanding tree failure—A systematic review and meta-analysis Published online 2021

Tree Risk Management Workshop: Course notes: Treelife

QTRA Practice note 2011

Appendix 1

Leased Properties

New leases shall explicitly identify where the responsibility for tree safety management lies. The paragraph below is to be inserted into all new leases.

'Tree Inspection and Management is the responsibility of ..Insert name. Consultants/contractors appointed to undertake Tree Inspection and Management works must follow the designated procedures in the council's Tree Risk Management Strategy and be appropriately qualified (LANTRA Professional Tree Inspection course as a minimum). Records of inspection, remedial work and qualification/training of the inspector(s) must be kept. Trees should also be inspected following high winds and storms.

Tree works must be carried out by a competent tree surgeon in accordance with the relevant British Standard (currently BS3998:2010).

……. Insert name will be responsible for complying with all current legislation and permissions/consents concerning Tree Preservation and Tree Protection. '

……. Insert name must consult the council and gain permission in writing before completing any works to council owned trees.