



TREE MANAGEMENT STRATEGY

LEICESTERSHIRE COUNTY COUNCIL

TREE MANAGEMENT STRATEGY

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TREE MANAGEMENT STRATEGY

INTRODUCTION

In 1994, the government published 'Sustainable Development, the UK Strategy and Urban Tree Strategies'. This recognised the value of trees and the wide-ranging contribution they make to our living environment. Subsequently, the former Department of the Environment along with the former Office of the Deputy Prime Minister supported and encouraged the production of tree management strategies by local authorities. Many authorities have now responded by producing their own tree management strategies and developing tree inventories which provide a basis for the management of the tree asset.

Leicestershire County Council is currently in the advanced stages of establishing an inventory of all its trees on a specialised computer database. This document, along with the tree inventory, will form the basis to the County Council's future tree management procedures and policies.

EXECUTIVE SUMMARY

The purpose of the Tree Management Strategy is to recognise the tree resource under the stewardship of the County Council and identify a standard for its management, which ensures its long-term conservation and development for the people of Leicestershire and future generations.

A Tree Management Strategy for Leicestershire County Council will : -

- provide a framework to establish a healthy, balanced and sustainable tree population capable of withstanding predicted climatic changes

- reduce the risk to the public from potentially hazardous trees

- specify the authority's policy on levels and standards of tree management

- ensure the most efficient use of resources

- increase public awareness of the value of trees in the environment

Public Consultation

In summer of 2006, a tree management questionnaire was sent out to over 2,500 households in a range of areas to gauge the public's perception of trees and how the County Council is regarded as a tree manager. The content and results of the questionnaire are included at Appendix A in this document.

The overall response to the questionnaire was very positive with a number of people commenting favourably on the exercise. The public perception of trees and their benefits is also very positive and the County Council is generally regarded as a good tree manager.

The consultation exercise demonstrates that trees are a much-valued asset in the county, and, as such, they should be managed both sympathetically and sustainably.

Trees in Leicestershire

The trees of Leicestershire are a valuable and essential element of our urban and rural landscapes, contributing significantly to the character of the County. They provide environmental, aesthetic, ecological and landscape benefits all of which enhance quality of life.

All trees in the County are situated on land which is affected by human activities. These activities often encroach onto the living environment of trees and therefore some form of management is required during their life span.

Tree management encompasses a range of different activities which :-

- ensure the safety of the public
- resolve conflicts between the tree and its immediate environment
- promote desirable growth characteristics and enhance amenity value
- benefit ecology and wildlife

The National Inventory of Woodland and Trees (Leicestershire) compiled by the Forestry Commission in 2002 recorded a tree population of between 5.5 and 6 million.

This is made up of 87% broad-leaved species and 13% coniferous species with 49% of the population being older than 50 years.

Many older mature trees, particularly in rural hedgerows are now in decline and have a limited life expectancy. Dutch elm disease and more recently ash decline have had a significant detrimental effect on the County's landscape and despite several tree planting initiatives in the intervening period, the impact of these diseases is still evident today. This effect is illustrated in the above census which records a 52% reduction in individual trees in Leicestershire between 1980 and 1998. A further change in the character of the County's tree population is likely in the short term, before the middle aged and young trees develop to maturity and impact fully on the landscape.

The impact of recent planting initiatives (e.g. The National Forest) will only become evident in the mid to long term as these trees reach an appreciable size. Since the impact of Dutch elm disease in the late 1970s, the County Council has introduced a number of tree planting initiatives and has supported the National Forest converting over 200 hectares of farmland and derelict land within Leicestershire into new woodland.

The County Council's Trees

The County Council manages approximately 70,000 individual trees and 170 hectares of established woodland on its land holdings. Numbers of individual trees on specific sites are as follows: -

Highway Trees -	40,000
Trees on Schools -	17,000
Trees on Country Parks -	10,000
Trees on County Farms -	2,000
Trees at Residential Homes -	1,000
Trees on Industrial Properties -	500

As highway authority, the County Council also has a 'duty of care' to inspect an estimated population of 400,000 privately owned trees adjacent to the highway.

The Tree Management Strategy identifies the major activities and considerations required for the County Council to effectively manage its tree resource. It considers each activity in detail, identifying the main technical, operational, environmental, social and strategic elements associated with tree management. It identifies appropriate standards for each activity by reference to relevant case law, industry recommendations and codes of practice. Such standards form the basis of the County Council's tree management policy, which is stated at the end of each section of the strategy and summarised in a separate tree management policy document.

The Tree Management Strategy provides a basis for the County Council to manage its tree resource in the future. An increasing need for new housing and other development, the expansion of our road network and the effects of climate change will put increasing pressure on the County's trees. The Tree Management Strategy will ensure that our tree resource is sustained and enhanced through these changes. It will help to promote trees as a valuable asset in our environment and provide a framework for maintaining and expanding the tree resource for future generations.

POLICY BACKGROUND

Leicestershire County Council's Responsibilities

The County Council as a tree owner has a direct responsibility to ensure that its trees do not pose a danger to the public or property and are managed appropriately. Recent injuries and fatalities resulting from failing trees and the outcome of subsequent litigation have placed an increasing obligation on tree owners to manage their trees more stringently. All local authorities should maintain a record of the trees under their responsibility. They should arrange for their trees to be inspected by a specialist at appropriate intervals and a record should be maintained of the details of such inspections. Such inspection intervals will be proportionate to the degree of risk posed by trees and will vary according to the level of use on each site. Any recommended maintenance work resulting from the inspections should be implemented and again, a record should be maintained of any maintenance work carried out. The above measures are considered to be a necessary requirement if a local authority is to be deemed as a responsible tree manager and would provide the authority with a basis for defence if proceedings were brought against them as a result of a failing tree.

The County Council also has a duty under the Highway Act to ensure that an estimated population of 400,000 trees in private ownership adjacent to the highway, do not pose a danger to its users. The Highway Authority must have systems in place which ensure that all roads are inspected at reasonable intervals, defective trees are noted, tree owners are identified and contacted and the appropriate work is undertaken to remove identified hazards. Leicestershire County Council undertake such inspections and provides technical advice to roadside tree owners.

Leicestershire County Council aims to provide high standards of tree management based on the latest arboricultural research and promote such standards with other parties, (e.g. private tree owners). This strategy therefore identifies appropriate standards of forestry and arboricultural practice.

Other Statutory Considerations

When a Local Planning Authority (LPA) is determining a planning application, trees are regarded as a material consideration and their integration in a new development is guided by the British Standard 5837:2005 'Trees in Relation to Construction-Recommendations'. This standard provides guidance to both planning authorities and developers on the successful retention and integration of existing trees within new development. It has regard to the development potential of the site and to the value of integrating suitable trees. It provides guidelines to ensure that trees are adequately and effectively protected during the construction process. (Ref. Standards of Work, Para 3.3, Page 18)

Some trees are protected by Tree Preservation Orders (TPOs) and a LPA has powers to make new TPOs if a tree has significant amenity value and/or is deemed to be under threat. The law relating to TPOs is detailed in Part VIII of the Town and Country Planning Act 1990 and in the Town and Country Planning (Trees) Regulations 1999. Guidance on the administration and application of TPOs is covered by 'Tree Preservation Orders: A Guide to the Law and Good Practice', published by the DETR in March 2000.

Trees located in Conservation Areas also have a degree of protection. The law relating to Conservation Areas is included in Part II of the Planning (Listed Buildings and Conservation Areas) Act 1990. Under section 211 anyone proposing to cut down or carry out work to a tree, which has a stem diameter of over 75mm at 1.5m, in a Conservation Area is required to give the LPA six weeks prior notice. The purpose of this requirement is to give the LPA an opportunity to consider whether a TPO should be made in respect of the tree.

Felling trees in woodlands requires a felling licence which is issued by the Forestry Commission through the English Woodland Grant Scheme under Section 9 of the Forestry Act 1967 (as amended). A licence is required for the felling of growing trees where more than 5 cubic metres of wood are to be felled in any calendar quarter.

Landscape and Ecological Considerations

The contribution of trees and woodlands to the County's landscape is addressed in the County Council's 'Leicester, Leicestershire and Rutland Landscape and Woodland Strategy'. Similarly, the ecological value of trees and woodlands is documented in the 'Leicester, Leicestershire and Rutland Bio-diversity Action Plan'. The conservation and enhancement of the landscape and ecological value of County Council's tree stock are important objectives of this strategy.

There is a potential conflict between the management of trees for public safety and the conservation of trees for ecological and landscape reasons. This is a difficult issue to manage and requires a flexible approach. Both management objectives are important but the nature and use of each site will normally dictate which one should take precedence. For example, if an ash tree with open branch wounds and a substantial column of decaying heartwood stood in a woodland or in a field hedgerow well away from public access, it would be highly valued as an ecological feature and should be managed accordingly.

The same tree, however, standing on a highway verge adjacent to a busy road would pose a significant danger to road users. Appropriate, but very different management prescriptions, would therefore be applied depending on the tree's location. When managing trees for public safety reasons, only the minimum work required to remove the danger should be undertaken to ensure that the trees' ecological and landscape benefits/potential are retained.

The County Council, when undertaking management work on its trees, has due regard to the 'The Countryside and Rights of Way Act 2000' and 'The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007' which provide protection for bats and nesting birds. All appropriate pre-works checks are carried out to avoid disturbance to protected species and wherever possible works are postponed if bats and nesting birds are present. In such cases specialist advice will be sought.

Veteran trees (defined by Natural England as 'trees which are of interest biologically, culturally or aesthetically because of age, size or condition'), are a valuable and increasingly scarce ecological resource. These should be managed and conserved, wherever possible, to maximise their habitat value and life span.

Climate Change

There is now very strong evidence to confirm that climate change is happening and that man-made emissions of carbon dioxide and other greenhouse gases are the main cause. It is predicted that temperatures could rise by as much as 5° C by the end of the century and the government now recognises climate change as 'the greatest long term challenge facing the world today'. Globally, forest eco-systems play a key role in addressing climate change by absorbing carbon dioxide from the atmosphere.

They also provide a source of wood, which is a low energy construction material and a less polluting source of energy compared with fossil fuels. On a local level trees and woodlands have an important role to play in mitigating climate change and it is essential that tree managers sustain and enhance this vital resource. The County Council has recently endorsed the 'Climate Change Strategy for Leicestershire' produced by ENABLE (Environmental Action for a Better Leicestershire).

Regional and National Policy

In 2005, the Forestry Commission produced a regional forestry framework for the East Midlands entitled 'Space4Trees'. This document identifies a sustainable approach to the management of the region's trees and woodlands focusing particularly on the association of trees with people, the environment and the local economy. More recently, the Department for Environment, Food and Rural Affairs (DEFRA) has produced a strategy for England's Trees, Woods and Forests. This again promotes the sustainable management of trees and woodlands to provide social, environmental and economic benefits, but also addresses the importance of our tree population adapting to the long term effects of climate change. An objective of this strategy is to ensure that these aims are achieved at a local level.

The National Tree Safety Group (NTSG) is a partnership of multi disciplinary organisations tasked with producing nationally recognised guidelines for tree safety management. Its aim is to produce guidance which is proportionate to the actual risk posed by trees and which recognises the benefits trees provide to society and the wider environment. The NTSG have recently sought comment on Draft Guidelines for Tree Safety Management and are currently finalising the guidelines which are intended to provide an industry benchmark.

Trees in Towns II, published in February, 2008, was commissioned by the Office of the Deputy Prime Minister (ODPM) to provide up-to-date information on the national urban tree stock and urban tree management by local authorities. The report recognises that local authority tree management programmes have a vital role to play in promoting the government's agenda for cleaner, greener, safer cities and the development of sustainable communities.

LEICESTERSHIRE COUNTY COUNCIL

TREE MANAGEMENT STRATEGY

1. TREE INSPECTION

1.1 Inspection Criteria

Acceptable and effective tree inspection procedures should ensure that changes in tree condition are noted and, if necessary, acted upon before the tree becomes hazardous and injury to persons or damage to property occurs. The County Council's tree inspection procedures take into account the following criteria : -

Species - Some species are more prone to develop physiological defects

Age of Tree - A tree is more likely to develop structural defects during the latter stages of its life.

Condition - Trees should be inspected more regularly if structural defects have been noted which increase the risk of failure in extreme weather.

Location - Surrounding features should be noted which would become a target if the tree collapsed or fell.

Level of Use - High levels of public use in the immediate vicinity of a tree will increase the likelihood of injury if a tree were to fail

Tree Population - The size and distribution of the tree population and the staff resources available will dictate the nature and frequency of an authority's tree inspection procedures.

Timing - Trees are best inspected when in full leaf, from mid-summer through to autumn, before leaf fall. However, if the scale of the operation dictates, inspections should continue throughout the year.

Hazard Risk – An assessment of risk posed by each tree is made by considering condition and size of the tree against the character of its surroundings (i.e. target area) and the level of activity in that area.

Habitat Value - An assessment of the tree's ecological value should be made and considered when prescribing tree management work. In particular, evidence of roosting bats or nesting birds should be noted and work planned to avoid any possible disturbance.

Other Factors – There are other factors which should be considered when formulating tree inspection procedures. For example, extremes of weather or construction work in a tree's immediate vicinity may necessitate a responsive inspection to monitor the effects on the stability of the tree.

1.2 Inspection Procedures

1.2.1 The County Council has tree inspection procedures which provide information to minimise the risk of damage to the public and property. Such procedures should be considered reasonable, proportionate to the level of risk at a particular location, recognise the benefits of the trees and acceptable in legal terms. (i.e. they should follow industry recommendations and codes of practice and stand up to legal scrutiny) The nature and frequency of such inspections should have regard to the criteria detailed at 1.1 and the size and distribution of the County Council's tree stock.

1.2.2 The following working methods and activities are employed to achieve an acceptable standard of tree inspection : -

- i) The creation and maintenance of computer generated tree inventories and management records.
- ii) Regular cursory inspections by highway inspectors and other site staff (e.g. Country Park Rangers)
- iii) Programmed specialist inspections by the County Council's arboricultural staff including : -
 - a) Initial driven inspections of roads.
 - b) Detailed inspection of all highway trees and defective privately owned roadside trees.
 - c) Detailed inspection of all individual trees on schools, care establishments, country parks and other County Council sites.

1.3 Privately Owned Trees adjacent to the Highway

The County Council, as Highway Authority, has a duty of care to ensure the safety of the road user and where roadside trees are privately owned this duty extends to notifying the tree owner of any potential hazards which threaten the highway. The County Council carries out a cyclic programme of inspections on the road network in Leicestershire. Having ascertained the ownership of a potentially hazardous tree, the tree inspector will meet the tree owner to identify the hazard and discuss its implications. Options will be given to the tree owner on the most appropriate management to remove the identified hazards. The tree owner is always urged to carry out the minimum work necessary to remove the hazard.

After a period of three weeks, if the necessary work has not been carried out, a formal notice will be sent to the tree owner which will include a covering letter, defect schedule, advisory notes and where necessary, a site plan. Further correspondence may be sent to the tree owner if the work is not carried out after subsequent three weekly inspections. Ultimately, the County Council's powers as Highway Authority extend to arranging for necessary work to be carried out and recovering costs from the tree owner.

The County Council is committed to promoting a responsible approach to tree management, particularly adjacent to the County's highways, and will ensure that : -

Tree owners will be contacted only if a tree poses a real danger to the highway

Tree owners are advised to adopt best arboricultural practice

Tree owners are advised not to undertake unnecessary work

Tree owners are encouraged to replant when dangerous trees have to be felled

1.4 Inspection Targets

The Leicestershire road hierarchy produced by the Environment and Transportation Department is based on levels of traffic use and classifies the county's roads as follows : -

Strategic Routes
Main Distributor Roads
Secondary Distributor Roads
Locally Important Roads
All Other Metalled Roads

This provides useful information for targeting priority areas when planning tree inspections and ensuring that procedures are commensurate with the level of risk posed by trees. On other sites, areas of high usage are identified (e.g. pedestrian routes, car parks etc) to target tree inspections.

In order to adopt appropriate and reasonable tree inspection procedures, the County Council has set the targets of inspection frequency to ensure that : -

- i) dangerous trees are identified
- ii) appropriate remedial measures are employed promptly to minimise the risk of injury to persons and/or damage to property
- iii) appropriate tree maintenance work is undertaken to ensure that the life expectancy, ecological value and amenity potential of the County Council's tree stock is maximised
- iv) private tree owners adopt appropriate standards of management

TREE MANAGEMENT POLICY NO. 1 – TREE INSPECTION

The County Council's tree inspection programme takes into account the criteria and procedures detailed in Section 1 of the Tree Management Strategy.

The County Council meet the following targets of tree inspection frequency : -

TREES IN THE HIGHWAY AND ADJACENT PRIVATELY OWNED TREES

Road Hierarchy Description	Highways Inspectors – Routine Inspections	Tree Inspector – Specialist Inspections
Strategic Routes	Annual basic inspections	Every three years
Main Distributor Roads	Annual basic inspections	Every three years
Secondary Distributor Roads	Annual basic inspections	Every three years
Locally Important Roads Including residential streets in Towns and villages	Annual basic inspections	Every three years
All Other Metalled Roads	Annual basic inspections	Every six years

TREES ON SCHOOLS, COUNTRY PARKS AND OTHER COUNTY COUNCIL PROPERTIES

Premises	Basic Inspections	Tree Officer/Inspector - Specialist Inspections
Schools	No formal basic inspections – observations reported by site staff	Every three years
Country Parks		
Areas of High Public Use (i.e. High Risk)	Annual basic inspections by Country Park Rangers	Every three years
Areas of Low Public Use (i.e. Low Risk)	Annual basic inspections by Country Park Rangers	None programmed – responsive inspections only
Adult and Young Person Care Premises	No formal basic inspections – observations reported by site staff	Every three years
County Farms		
Areas of Highest Risk (e.g. Premises)	No formal basic inspections – observations reported by tenants	Every three years
Industrial Properties		
Areas of Highest Risk (e.g. Premises)	No formal basic inspections – observations reported by tenants	Every three years

TREE MAINTENANCE OPERATIONS

2.1 Identification and Generation of Work

Tree maintenance work originates from the following internal and external sources : -

- a) Programmed inspections by Tree Officers/Inspectors – as part of the inspection procedures detailed in Section 1.
- b) Ad-hoc inspections by Forestry Officers and Tree Inspectors – as a result of enquiries received from the general public and members relating to tree safety and actionable nuisance issues.
- c) Enquiries from other LCC officers
- d) Reports from the Customer Service Centres
- e) Reports from the Highways Management System (HMS)
- f) Enquiries from other local authorities
- g) Cyclic maintenance (e.g. re-pollarding of street trees)
- h) Emergency Works (e.g. resulting from high winds)

2.2 Work Priorities

An assessment is made of all incoming enquiries relating to trees before appropriate maintenance work is specified and ordered. Such an assessment takes into account factors such as tree safety implications, risk of potential claims relating to actionable nuisance, proposed remedial work, the effects of any proposals on long term tree health, the legitimacy of the enquiry and the most efficient and cost-effective courses of action. To ensure that current resources are utilised most effectively, the different types of tree enquiry are categorised into the following priority work areas : -

PRIORITY 1 - Matters of safety where there is a significant danger to the public and property.

PRIORITY 2 - Remedial and preventative work which removes potential hazards

PRIORITY 3 - Works which conserve and enhance the ecological and aesthetic value of veteran and locally prominent trees

PRIORITY 4 - Works which promote the effective establishment of newly planted trees

PRIORITY 5 -
i) Works to remove or alleviate a nuisance to property which could potentially cause damage and/or result in action against the County Council

ii) Works which address a minor nuisance to Property

The significance of tree nuisance issues is often dictated by personal perception. For example, an issue of shade to a garden may be regarded as a significant nuisance by one individual and a significant benefit by another. Some nuisance issues may only be effectively resolved by either : -

- a) substantial tree work (e.g. heavy crown reductions) which is potentially detrimental to tree health, safety and amenity, or
- b) tree removal

and consequently, the County Council will only consider such issues against the benefits of the tree to the immediate locality, the nature of the enquiry, the significance to the public/property and the extent of potential remedial work.

The prioritisation of incoming enquiries aims to ensure that : -

- i) all high priority work identified or requested is undertaken promptly
- ii) existing resources are utilised efficiently and most effectively
- iii) the County Council respond positively to all legitimate requests for work to be carried out
- iv) County Council staff are empowered to refuse unreasonable requests to carry out work on trees
- v) the County Council's tree maintenance meets high standards of arboricultural practice

TREE MANAGEMENT POLICY NO. 2 – TREE MAINTENANCE

The County Council has adopted the following tree maintenance policy which takes into account the issues detailed in Section 2 of the Tree Management Strategy : -

PRIORITY 1 - PUBLIC SAFETY

The County Council will undertake all work which removes actual hazards to safeguard the public and property

PRIORITY 2 - REMEDIAL/PREVENTATIVE WORKS

The County Council will undertake all work which : -

- a) remove potential hazards that may subsequently threaten public safety or property
- b) prevent or minimise the effects of a tree on the structure of a property (e.g. preventative subsidence related work)

PRIORITY 3 - MANAGEMENT OF VETERAN TREES

The County Council will, where public safety is not compromised, undertake all work which,

- a) conserves trees with high ecological value and,
- b) preserves trees with significant local historical and/or aesthetic value

PRIORITY 4 - YOUNG TREE MAINTENANCE

The County Council will undertake all work which

- a) assists the establishment of young trees with significant life expectancy and,
- b) enables new tree planting to reach its full potential

PRIORITY 5 - NUISANCE MANAGEMENT

- i) The County Council will undertake remedial work where it is considered that its trees are causing an actionable nuisance to a neighbouring property.

For example : -

Root/branch encroachment over property boundaries where damage has occurred or is likely to do so imminently.

- ii) When a tree is thought to be causing a nuisance which does not threaten public safety or property, the County Council will consider appropriate remedial works during the next programmed cyclic inspection of that tree.

The County Council is unable to undertake one-off, reactive inspections to consider general nuisance issues such as : -

- Shade onto a garden or property
- Deposits of seed/leaf litter
- Tree is considered too large
- Summer honeydew deposits
- Droppings from roosting birds
- TV reception interference

3. STANDARDS OF WORK

Modern Arboricultural Practice

Modern arboricultural practice is based on the most recent scientific research into tree biology and physiology. This research has concentrated on a number of specific areas including : -

- Effects of maintenance works on tree biology and functioning
- The tree's response to wounding (i.e. pruning)
- Timing of maintenance operations in relation to seasonal fluctuations in tree energy reserves
- Structural/mechanical properties of trees

Modern tree maintenance techniques have been formulated to minimise any possible adverse effects on the tree and promote its healthy development.

Perceptions of Tree Management

Tree maintenance is often judged purely on the visual effect of the work rather than the effects of the work on long term tree health. There is, therefore sometimes a conflict between good practice and what is perceived as "a good job". The County Council provide advice on tree management and refer members of the public to industry advisory literature, where appropriate.

3.1 Leicestershire County Council Specifications

The County Council undertakes all tree maintenance work in accordance with its own forestry and arboricultural works specifications. These require a high standard of forestry and arboricultural practice which takes into account the principles of modern arboriculture and embraces the findings of recent and current arboricultural research.

3.2 British Standard 3998 : 2010 'Tree Work - Recommendations'

The national standard for tree surgery work is defined in British Standard 3998: 1989 'Recommendations for Tree Work'. This standard is often quoted by the County Council and should be the basic standard followed by all tree work contractors. B. S. 3998 is currently under review by the British Standards Institute and a draft of the revised standard is due to be released for consultation in the near future. Once the new standard is finalised, the County Council's own specifications will be amended, where necessary, to accord with any new requirements.

3.3 British Standard 5837 : 2005 'Trees in Relation to Construction' -

There is often a conflict between maximising the development potential of a site and retaining existing trees. Consequently, construction activities throughout the country account for the loss of many trees each year. The retention of suitable existing trees is highly desirable, often enhancing the quality of the development and facilitating its integration into the surrounding landscape. It is important, however, to ensure that retained trees and new dwellings exist compatibly, well beyond the completion of the development. If trees are to be retained effectively, measures to protect them need to be thorough and should be understood by all parties involved in the construction process (i.e. from architect to site operative).

The national standard for selecting, preserving and retaining trees within new development is B.S. 5837 : 2005 'Trees in Relation to Construction - Recommendations'. This standard forms the basis of advice the County Council provides to its own planning officers and other planning authorities. The County Council is committed to promoting best practice when managing and integrating trees in association with new development.

3.4 Highway Works and Trees

Highway maintenance and improvement works can have a damaging impact on highway and roadside trees. It is often very difficult to accommodate the space required for a tree to be retained within highway improvements because of the linear nature of road corridors. Guidance on the integration of existing trees within highway works is included in a DETR Consultation Paper entitled 'Roots and Routes'.

The County Council has its own guidelines on "Highways, Transportation and Development" and Information is given at Appendix F on the 'Preservation of Trees'. Many trees on or adjacent to highway verges suffer significant damage due to the excavation of trenches to accommodate services and highway drainage. Trenches excavated through a tree's rooting zone can seriously impair its stability and normal biological function. This can have a direct effect on the safety of a tree and the hazard it poses to passing traffic. The appropriate working methods to successfully install a trench through a tree's rooting zone are detailed in the National Joint Utilities Group (NJUG) Guidance Publication No. 10.

The use and storage of road salt can have a significant toxic effect on trees particularly if concentrations leach into the soil within a tree's root system. Road salt should only be stored on highway verges in sealed containers well away from the potential rooting zones of nearby trees.

3.5 Tree Planting

The County Council undertakes all tree planting work in accordance with the relevant section of its own work specifications. These specifications accord with the following standards : -

- B.S. 3936 : 1992 Nursery Stock
- B.S. 4043 : 1989 Transplanting Root-balled Trees
- National Plant Specification
- LCC Highways, Transportation and Development – Appendix G (Landscaping on new developments)

When designing new native tree planting, the County Council will normally specify stock produced from seed collected from the appropriate Forestry Commission seed zones. Where the primary aim of a new tree planting scheme is to conserve or enhance nature conservation nursery stock should be produced from seed collected from local sources, if such seed is available.

TREE MANAGEMENT POLICY NO. 3 – STANDARDS OF WORK

The County Council has adopted the following policy relating to standards of work to ensure that it achieves high standards of forestry and arboricultural maintenance.

1. The County Council follows the requirements of all appropriate British Standards and industry codes of practice relating to tree maintenance and other works which affect trees.
2. The County Council has provided its own work specifications relating to forestry and arboriculture. These are revised and updated, when appropriate, to take into account the findings of current research and advances in modern arboricultural practice.
3. The County Council promotes good tree management practice with the general public, based on the latest research.

4. SUSTAINABILITY

4.1 Environmental Sustainability

Any tree population, regardless of size and character, should be managed sustainably to conserve or enhance its status. As a minimum standard, any losses should be replaced with new trees on a one for one basis. Failure to achieve this will result in the decline and deterioration of the tree population in the long term. The importance of this principle has been recognised on a global scale because of indiscriminate logging of primary forests in various parts of the world which do not include plans to conserve, protect or regenerate the forest environment. The impact of non-sustainable forest management continues to be a major concern today and consequently, the Forest Stewardship Council (FSC) has been set up as an international non-governmental organisation with the aim of developing an independent system for the certification of timber and timber products from sustainable sources. This provides a market mechanism to reward sustainable forest management and allows consumers of wood products to make a choice and influence the management of forests.

The UK Forestry Standard was published in 1998 and sets out the Government's approach to sustainable forestry. This encourages woodland owners to achieve woodland certification in accordance with the UK Woodland Assurance Standard (UKWAS). This is an independent certification standard for verifying sustainable forest and woodland management in the United Kingdom. The UKWAS standard is currently the central component of the forest certification programme operated in the UK by the Forest Stewardship Council (FSC). Woodland certification on woodlands over 30 hectares in size is now a pre-requisite to obtaining woodland management grants through the English Woodland Grant Scheme (EWGS), administered by the Forestry Commission. Sustainable management is therefore essential both on a global and local scale and should be adopted by all local authorities responsible for managing both individual tree populations and woodlands.

Sustainable systems of management should : -

- Maintain or enhance the tree population

- Facilitate the removal of dangerous or potentially hazardous trees

- Promote bio-diversity and conserve the tree/forest eco-system

- Conserve veteran trees with significant ecological, historical and amenity value

- Establish a tree population with a balanced diversity of age-classes

- Optimise the use of timber and other products of tree management

Trees and Climate Change

Trees counter the effects of climate change by absorbing carbon dioxide from the atmosphere and will play an important role in our environment as temperatures rise. In towns and cities, where temperatures are exacerbated by heat and light reflection from buildings, there will be an increasing need for effective areas of shade. Carefully positioned tree planting can provide effective cooling to buildings, decreasing the need for air conditioning. Areas of shade will also be vital adjacent to outdoor facilities such as shopping precincts, bus stops and car parks. In particular, shade will benefit school playgrounds and the grounds of care establishments, providing a degree of protection to more vulnerable members of the population.

An additional consequence of climate change is the increased possibility of flash flooding, the devastating effects of which were seen in Boscastle, Cornwall on August 16, 2004 and more recently in the West Midlands. In such cases, the presence of trees and woodlands have a stabilising effect on the soil, limiting erosion damage and reducing the possibility of landslides.

Climate change will inevitably have a detrimental effect on our present tree population. Shallow rooting species such as beech and hornbeam often suffer drought stress during hot periods. Trees can recover from drought conditions particularly if they occur as single one-off events, but if such conditions are repeated year on year, they can easily succumb. An increased occurrence of high winds, particularly when soils are waterlogged and deciduous trees are in leaf can also have a very damaging effect on the local tree population. Warm summers and milder winters can favour the existence of harmful tree pathogens, which become more prevalent in such conditions. An example is the occurrence of horse chestnut bleeding canker (*Pseudomonas syringae* *pv aesculi*) which has increased significantly in recent years in Leicestershire and other parts of the Midlands.

It is important, therefore, for tree owners to protect the current tree resource, ensure that it is sustained and where possible, expanded. It is also important that landscape architects and tree managers have regard to the effects of climate change, particularly when selecting new trees for planting schemes.

The Need for Tree Planting

The tree population of Leicestershire changed significantly in the late 1970s when Dutch elm disease accounted for the loss of more than 200,000 mature trees in the County's landscape. An ageing mature tree population and the incidence of other disorders such as ash decline in rural hedgerows have resulted in a continuing decline in our mature trees. Additionally, mature trees continue to be lost through residential and commercial development.

The County Council supports some small scale tree planting initiatives through its Tree Planting initiative, Shire Grants and the Stepping Stones Countryside Project. On County Council land, larger capital schemes have been and continue to be implemented. These include several National Forest Schemes and intensive landscape schemes on newly constructed roads such as the Ashby and Rearsby by-passes. A sustainable system of tree management does require a continuous and on-going programme of tree planting to maintain the population and eventually establish successive generations of trees.

Design and Aftercare

The design of new tree planting should ensure that it complements the local landscape character and enhances the immediate environment. Planting density and species selection should be guided by available space to ensure that each tree is compatible with its new site and has every opportunity to develop into a healthy mature specimen. Appropriate levels of aftercare need to be employed to ensure that the tree can fully establish and develop. A new tree will only reach its potential as a mature specimen if adequate resources are available to maintain it through its life.

4.2 Economic Sustainability

Utilisation of Timber

The County Council will continue to maximise the financial value of timber harvested as part of its woodland management operations. All timber harvesting will be part of an approved management plan which will be scrutinised by the Forestry Commission as part of the assessment process when the County Council applies for felling licences or grants under the English Woodland Grant Scheme. This assessment process will include consultation with District Councils and other bodies such as Natural England, when appropriate. The County Council will also continue to identify a wide range of potential markets to maximise the economic value of its woodlands.

Use and Re-cycling of Wood Waste

The County Council produces 3 - 5 cubic metres of wood waste each day from its tree surgery and maintenance operations. This equates to an annual total of approximately 1,000 cubic metres (approx. 600 tonnes), 800 cubic metres of which is wood chipped during clearance operations and the remainder takes the form of tree trunks, large logs and tree roots. If this material were to be disposed of at a refuse tip, costs in excess of £30,000 would be incurred each year. These costs are currently saved as the County Council processes all its wood waste into wood chip and supplies this material as wood fuel to supply a specialist energy plant.

4.3 Social Sustainability

The County Council manages its trees and woodlands to provide a positive influence on the public and local community. This can be achieved by the following:-

Effective tree inspection/maintenance procedures to maximise public safety

Well planned tree planting design to maximise landscape benefits and minimise potential conflicts

Careful selection and retention of established trees on new developments to maximise aesthetic benefits and minimise potential conflicts with new residents

TREE MANAGEMENT POLICY NO. 4 – SUSTAINABILITY

The County Council aims to achieve the following sustainability targets : -

1) WOODLANDS

The County Council will adopt standards of woodland management in all its woodlands commensurate with the UK Woodland Assurance Standard (UKWAS).

2) TREE PLANTING

- a) The County Council will, as a minimum standard, replace all individual, non-woodland trees which are felled on a one for one basis on all its sites.
- b) The County Council will seek to increase its tree population by implementing appropriate tree planting schemes on suitable sites. Such planting will include landscaping on capital schemes and woodland establishment in target areas such as the National Forest.
- c) The County Council will encourage private tree owners to plant new trees and provide replacements when mature trees adjacent to the highway have to be removed for safety reasons.
- d) The County Council will continue to support and encourage other authorities to implement well planned tree planting schemes which promote sustainable tree management.

3) LONG TERM MAINTENANCE AND AFTERCARE

The County Council will provide appropriate long term maintenance to new tree planting to ensure that these features reach their full potential in environmental terms, and initial investment is maximised.

4) RE-CYCLING OF WOOD WASTE AND UTILISATION OF TIMBER

The County Council shall continue to explore various options relating to the utilisation of timber and the re-cycling of wood waste. Possible partnerships with other producers will be investigated to identify future viable markets for timber and other by-products of tree maintenance operations.

5. WOODLAND MANAGEMENT

Trees in woodland areas have traditionally been, and continue to be, planted at relatively close spacing (e.g. 2 metres apart). This enables the new woodland to dominate surrounding vegetation and establish much quicker. Initially the young trees provide shelter for each other, but eventually start to compete for light, space, soil moisture and nutrients. This triggers a natural selection process where the stronger trees start to dominate. At this point the forester will start thinning works to provide the space for the best trees to continue to develop. If management works are not implemented at this stage, competition between trees forces them to become tall and drawn. This ultimately will cause the trees to become unstable and dangerous, particularly in windy conditions. There is a significant public safety implication if woodlands/plantations are not managed through their life, particular if public access is provided through the woodland or it adjoins an area of high public use. (e.g. a plantation on a highway verge) The County Council therefore adopts a policy of on-going management in all its woodland areas. If these woodlands are to be retained in the County's landscape in the long term, such management should include periodic re-stocking in order to accord with the sustainability policy detailed in Ch. 4 above. This form of management will eventually provide a wide diversity of age-structure within the County Council's woodlands. This will enable the County Council's tree managers in the future to adopt management systems which provide a high proportion of mature tree cover at any one time.

Public Perceptions

Systems of woodland management are designed to secure the long term retention of the woodland and enhance its landscape and nature conservation value. These long term objectives will only be achieved if there is an on-going programme of woodland management. This may require works which drastically change the appearance of the woodland in the short term. Woodland management works particularly involving harvesting can appear devastating. These works are often judged by the public purely on the initial visual impact of the work rather than its long term benefits to the woodland.

Highways - There are approximately 10 hectares of woodland plantations in highway verges in Leicestershire. Much of these woodland areas are young or semi-mature and are a result of planting initiatives implemented during the last 25 years. (e.g. verge planting in the National Forest, the Young Persons Forest at Wymeswold and various by-pass schemes). Many of these areas are now in need of thinning/ re-spacing to allow retained trees to develop into well formed, stable specimens.

Country Parks – There are 120 hectares of established woodland on the County Council's Country Parks estate. Approximately 90 hectares of these woodlands are mature and a further 60 hectares have been recently established utilising funding from the National Forest Tender Scheme. The Country Parks maintenance budget provides some funding for woodland management. This is supplemented by grants from relevant organisations such as the Forestry Commission (English Woodland Grant Scheme) and occasionally from timber sales, when there is sufficient demand from the timber market.

Consequently, there is a periodic programme of woodland management on Country Parks which covers health and safety works, harvesting, thinning, re-stocking and other desirable operations such as coppicing. Much of this work is carried out in accordance with documented management plans, which form part of grant applications to the Forestry Commission and as such, are subject to a thorough consultation process.

Farms - There are 48 hectares of mature woodland on the County Council's County Farms estate. The County Farms estate budget provides some funding for tree management which is mostly utilised undertaking health and safety related work on estate trees adjacent to roads.

Schools and other County Council sites - There are many small, dispersed areas of woodland on schools and other County Council sites amounting to approximately 15 hectares in area. On schools, works may be recommended for woodland areas as part of the on-going inspection programme for schools. In such cases, the costs of any recommended work would be met by the school from devolved budgets. On other sites, woodland management work would be funded from site maintenance budgets held by the managing department (e.g. plantation areas on industrial estates)

TREE MANAGEMENT POLICY NO. 5 – WOODLAND MANAGEMENT

The County Council will manage its woodlands to achieve the following management objectives : -

- 1) Produce management plans for all main woodland areas .
- 2) Aim to diversify the age-class of trees within woodlands by adopting a policy of periodic thinning/harvesting and restocking which in the long term will create diverse, uneven aged tree populations.
- 3) Continue to carry out low key operations such as coppicing as part of long term management systems to conserve and enhance the nature conservation value of woodlands.
- 4) Ensure that sufficient funding is available from revenue budgets, external grants and timber sales to ensure that appropriate on-going woodland management can be undertaken on all County Council woodlands.

6. TREE RELATED SUBSIDENCE

The incidence of tree related subsidence damage to buildings has increased significantly during the last 20-30 years. This is partly due to an increased understanding of the complex interactions between the tree, the soil, the building, and more significantly, an increasing litigious approach to these occurrences. Subsidence damage associated with trees occurs when a tree extracts moisture from a shrinkable soil such as clay, through its root system, causing the clay to shrink and/or subside. If the foundations of a building are constructed on such a soil, subsidence damage can occur to the fabric of the building. When assessing subsidence risk or considering tree related subsidence cases, the following factors are taken into account : -

- Size and age of tree
- Its typical water demand
- The time of year
- Seasonal climatic conditions - (e.g. drought periods)
- The type of soil - (e.g. clay)
- Its reaction to water (i.e. hydrology)
- Its capacity to shrink/swell (i.e. plasticity)
- The age and quality of the building
- The depth and type of foundation
- The distance from tree to building
- The tree/building site history.

Cases of subsidence damage associated with trees are often complicated and require a wide range of information to be properly considered.

Enquiries

The County Council receives between 50 and 100 enquiries each year relating to trees and potential damage to adjoining property structures. Each enquiry is followed by a site inspection and when appropriate, preventative tree maintenance may be carried out where the potential for further damage exists. If actual damage to adjoining property exists which could possibly be associated with a County Council tree, the property owner is at liberty to submit a formal insurance claim to the County Council's Insurance Section.

Insurance Claims

The County Council is obliged to deal with all insurance claims in accordance with the recommendations of The Woolf Report 'Access to Justice' 1996. This details a specific timetable by which the various stages of an insurance claim should be dealt with by the defending party. In order for each case to be considered, the plaintiff should provide sufficient evidence to substantiate a claim. The County Council will therefore require the following information in order to consider a claim associated with tree related subsidence: -

- Description of type of damage
- Indication of seasonal movement
- Levels and distortion survey
- Visual evidence of damage
- Depth of foundations demonstrated from excavated trial holes
- Analysis of soil type under foundation
- Presence and identification of tree roots

When this evidence has been provided, the County Council's Forestry group will visit the site, assess the evidence provided and advise the Insurance Section accordingly,

Tree Inspections and Subsidence Risk

The County Council considers the potential for subsidence damage as part of its tree inspection procedures documented in chapter 1. There has recently been an increasing demand from mortgage lenders, insurance companies and others for standardised assessments of the risk of subsidence damage to structures from nearby trees. Attempts have been made to produce subsidence risk formulae but these have been unsuccessful due to the high range of variables, the lack of scientific data and the probability of unnecessary tree loss. The County Council does, however, refer to industry recognised published data when assessing likely subsidence risk.

TREE MANAGEMENT POLICY NO. 6 – TREE RELATED SUBSIDENCE

When enquiries are made regarding the possibility of subsidence damage, the County Council will : -

- 1) Respond by inspecting the site and perceived damage, liaising directly with the property owner or their specialist representatives and when appropriate, arranging for remedial/preventative work to be carried out.
- 2) Deal with all subsidence related insurance claims through its own Insurance Section in accordance the requirements of the Woolf Report.
- 3) Consider subsidence related insurance claims only when sufficient evidence has been provided to accurately assess the legitimacy of the case.
- 4) Assess the potential and risk of possible subsidence during its own routine tree inspection programmes.
- 5) Carry out appropriate preventative tree pruning work on sites where the potential for tree related subsidence is high.

7. NOTIFICATION

The overall public perception of trees and their value in the local environment is a very positive one. This is borne out by the overall results of the Tree Management Questionnaire and the number of expressions of concern received when trees are felled. These are invariably followed up by requests to plant replacement trees. There is therefore considerable public support for the County Council to adopt a positive approach in all areas of tree management

The general public and particularly local residents occasionally express concern when tree works are carried out in their area. Ideally, the County Council would notify all affected parties whenever it intends to carry out works to its trees and woodlands. Such parties may include residents in the immediate vicinity of the work, the local parish council and regulatory bodies such as the District Councils and/or the Forestry Commission where Tree Preservation Orders, Conservation Areas or large scale tree felling is involved. However, due to the volume and scale of its tree work operations, it is not possible to notify all interested/affected parties on each occasion. There is, however, a need for consultation when the scale and potential impact of the works is likely to have significant local effect.

Tree maintenance work undertaken by the County Council varies considerably from large scale tree felling to minor pruning and other maintenance work. Operations can be classified into the following categories : -

A. Major Tree Work which significantly impacts on the locality

Examples : - Clear felling an area of woodland
Major pruning of all trees within a street.

B. Major Tree Work which significantly impacts on an individual property

Examples : - Felling/pruning of a tree immediately adjacent
Planting of a new tree immediately adjacent

C. Minor Works with limited visual impact

Examples : - Remedial/formative pruning of individual trees
Selective felling/thinning within a woodland

TREE MANAGEMENT POLICY NO. 7 - NOTIFICATION

The County Council will adopt the following notification procedures prior to undertaking programmed management works to its tree and woodlands : -

A. Major Tree Work which significantly impacts on the locality

Notify - All residents immediately adjoining the site
Parish Council (through Parish Clerk)
District Council and other appropriate regulatory bodies
Local Member

B. Major Tree Work which significantly impacts on an individual property

Notify - Owner(s) of property immediately adjacent

C. Minor Works with limited visual impact

No notification will be undertaken

8. RESPONSE TO EMERGENCIES

In line with other areas of service delivery, the County Council has procedures and arrangements in place to deal with emergency situations relating to trees. During and after seasonal gales, the County Council's Forestry Group receive a very large number of calls reporting fallen trees and branches. Many of these may be causing an obstruction and some could possibly have caused damage or injury. These are dealt with during normal working hours, but a considerable number are also received at night, by duty officers at, for example, divisional highway offices. These calls are often received from the police who require a swift response, particularly if a road is blocked or the tree in question is associated with a road traffic accident.

Call out procedures

During periods of extreme weather, a suitably equipped and skilled tree surgery response team should be available outside normal working hours to deal with any tree related emergency situations. This enables the County Council to deal with any incident promptly after it is reported. When weather conditions are severe, a high number of incidences can be reported in a short period of time. In such circumstances, a means of assessing and prioritising work can be extremely beneficial. It may also be too hazardous to deal with some situations during the night and a temporary road closure should therefore be established until conditions allow the clearance work to be undertaken. During these circumstances, procedures should also allow for a 'night scout' to be available to pre-assess emergency incidences and prioritise work with response teams.

TREE MANAGEMENT POLICY NO. 8 – RESPONSE TO EMERGENCIES

1. The County Council will provide a call out procedure to deal with tree related highway emergencies which will involve a tree surgery response team, available during periods when high winds are predicted. The response team will be located to ensure that they can deal with any tree-related emergency in Leicestershire within two hours.
2. Enquiries will be prioritised to ensure that high priority situations are dealt with immediately and lower priority situations are dealt with during daylight when working conditions are safer.
3. Follow-up inspections will be undertaken by a Forestry Officer in emergency situations involving personal injury, damage to property or where only part of a tree has failed and the remaining part requires a safety assessment.

9. REVIEW AND MONITORING

After the introduction of the Tree Management Strategy, the implementation of the specified policies will be regularly monitored to ensure that the objectives of the Strategy, detailed in the Executive Summary, are met. Monitoring should consider the appropriateness of each policy to ensure that it maintains appropriate standards of tree care, whilst also considering the needs and concerns of the public. The work the County Council undertakes in implementing the Strategy should maintain the public's positive perception of trees and raise the County Council's profile as a tree manager.

There will also a need to periodically review the Strategy itself to take into account the development of the County's tree population, changes in research, work techniques and codes of practice, public opinion on the County Council's tree management, tree health issues and the progress of climate change. A major review of the Strategy will therefore be undertaken every five years after its formal introduction.

APPENDIX A

TREE MANAGEMENT QUESTIONNAIRE

Leicestershire County Council Tree Management Questionnaire

Results

Q1) Trees enhance our living environment and provide a wide range of positive benefits in...

	Agree	Disagree
private gardens	90.80%	6.80%
residential streets	90.90%	6.10%
rural highway verges	91.60%	5.50%
school playing fields	92.10%	4.30%
parks and open spaces	97.40%	0.80%
Farmland and woodland	97.10%	0.40%

Q2) Having trees near your house has a positive effect on local property values...

Agree	Disagree
80.30%	17.20%

Q3) Trees have a positive effect on the local community's health and sense of well being...

Agree	Disagree
93.50%	5.50%

Q4) Trees are essential in our residential environment because they...

	Agree	Disagree
absorb pollution	87.0%	4.80%
provide shelter	78.60%	11.50%
provide a haven for wildlife	88.40%	1.20%

Q5) More trees should be planted in...

Agree	Disagree
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residential streets	78.90%	13.60%
highway verges	82.50%	10.60%

Q6) More trees should be planted in parks and open spaces...

Agree	Disagree
92.20%	1.30%

Q7) More trees should be planted in rural farm hedges...

Agree	Disagree
85.80%	5.80%

Q8) Trees in residential streets and on rural highway verges are generally well maintained...

Agree	Disagree
65.10%	26.30%

Q9) Trees in residential streets and rural highway verges generally cause a nuisance to local residents and road users...

Agree	Disagree
12.40%	82.60%

Q10) Trees should be gradually removed from residential streets and rural highway verges...

Agree	Disagree
6.70%	88%

Q11) Trees in local streets and highway verges should be pruned more often...

Agree	Disagree
68.20%	28.70%

Q12) If I have a concern about a tree, it is easy to make contact with the relevant section at the County Council...

Agree	Disagree
53.60%	25.40%

Q13) Trees in local streets and on highway verges should be pruned if they...

	Agree	Disagree
cast heavy shade into the gardens	79%	17.50%
cast light shade into gardens	31.20%	62.70%
shed leaves	32.10%	63.20%
shed fruit, seeds and other debris	44.30%	50.80%
attract roosting birds	25%	69.60%
affect TV reception	68	27.5
block views	66.5	30.2

Q14) The County Council should invest resources into the following tree management activities...

	Agree	Disagree
safety works (e.g dangerous trees)	94.20%	2.90%
reduction/ removal of nuisance to the general public	78.80%	15.40%
maintenance/ enhancement of local tree population	94.10%	3.10%
maintenance/ enhancement of wildlife habitats	93.80%	2.80%

Q15) County Council woodlands in Country Parks should be managed to achieve the following objectives...

	Agree	Disagree
provide public access	88.30%	4.20%
create wildlife habitats	92.50%	1.90%
produce timber	49.10%	41.30%
promote public safety	80.80%	8.30%
maintain a high proportion of mature trees	90.20%	2%
increase woodland cover	86.80%	2.70%
provide areas for shooting, hunting etc.	18.60%	72.60%

