



Oadby and Wigston Borough Council

TO COUNCILLOR:

G S Atwal
L A Bentley
Ms A R Bond
G A Boulter (Chair)
J W Boyce

Mrs L M Broadley
F S Broadley
D M Carter
Ms K Chalk
Miss M V Chamberlain

Mrs S Z Haq (Vice-Chair)
Dr T K Khong
K J Loydall
R H Thakor

Dear Councillor et al,

I hereby summon you to attend a meeting of the **SERVICE DELIVERY COMMITTEE** to be held at the Council Offices, Station Road, Wigston on **TUESDAY, 22 MARCH 2016** at **7.00 PM** for the transaction of the business set out in the Agenda below.

Yours faithfully

Council Offices
Wigston
17 March 2016

Mark Hall
Chief Executive

AGENDA UPDATE

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SERVICE DELIVERY COMMITTEE

ACTION LIST

ARISING FROM A MEETING HELD ON MONDAY, 19 JANUARY 2015

Min Ref.	Title	Action To Be Taken	Officer	Target Date	On Target
42.	Committee Revised Financial Position 2015/16 and Draft Budget 2016/17	To provide a report addressing the long-term potential of New Home Bonuses (NHB's).	MHo	Apr-16	Yes
42.	Committee Revised Financial Position 2015/16 and Draft Budget 2016/17	To review the budget and remove any unnecessary budget heads (e.g. Senior Citizens Grants, SCG's).	MHo	Mar-16	Yes
43.	Housing Finance Update - Housing Revenue Account (HRA)	To undertake a review of the Council's non-dwelling sites and assets to ascertain any potential better uses.	MHo	Apr-16	Yes
44.	Community Services Update	To provide report detailing an assessment of property voids within the Borough.	SG	Mar-16	Yes
44.	Community Services Update	To undertake a feasibility study into development at Canal Street, South Wigston, and identifying any third-party developers.	AT/SM	Apr-16	Yes (Led by the Regeneration Team)
44.	Community Services Update	To prepare a quantum of need vis-a-vis provision, including a performance-assessment matrix and footfall record, in relation to Housing Related Advise (HRA) and other advisory services (i.e. HH / CAB).	SG	Mar-16	Yes (See report to PFD, 29 March 2016)
50.	Operations and Facilities Services Update	To draft a letter to Leicestershire County Council outlining this Council's concerns regarding the implications of itemised-charging for non-household items.	AC	Mar-16	Yes
53.	Customer Services Transformation - Progress Report	To re-position the black granite blocks on Bell Street, Wigston to prohibit vehicular access.	AC/BK	Mar-16	Yes



*Oadby and Wigston
Borough Council*

Draft Tree Strategy for consultation

Oadby and Wigston Borough Council

DATE: 25 November 2015

1.0 Purpose of this strategy

This document is about the best and most versatile product in the world; trees! They beautify, cleanse, nourish, and heal. They are useful, practical and renewable. They create landscapes, habitats and communities. They are an asset that gets more valuable with time. Everyone has seen and touched them. Oadby and Wigston Borough Council recognise the importance of trees and this strategy is for everyone, as trees touch all of our lives.

Oadby and Wigston Borough Council has three corporate priorities; to create:

- A good quality of life for all residents
- A clean, greener and safer environment
- A successful economy

Trees are an integral part of delivering these priorities; connecting commerce, recreation and public health. Information on the role of trees in your Borough, how to look after the tree scape, and get involved with your local trees, is an important part of this strategy. This strategy sets out how the council will look after our own trees, how we will deal with protected trees, and how we will consider trees and development.

Getting involved

This is a draft for public consultation. Getting involved will refine this document, and make it the most effective it can be. You can comment [at xxxxxx](#)

The consultation process is: xxxxxxxxx

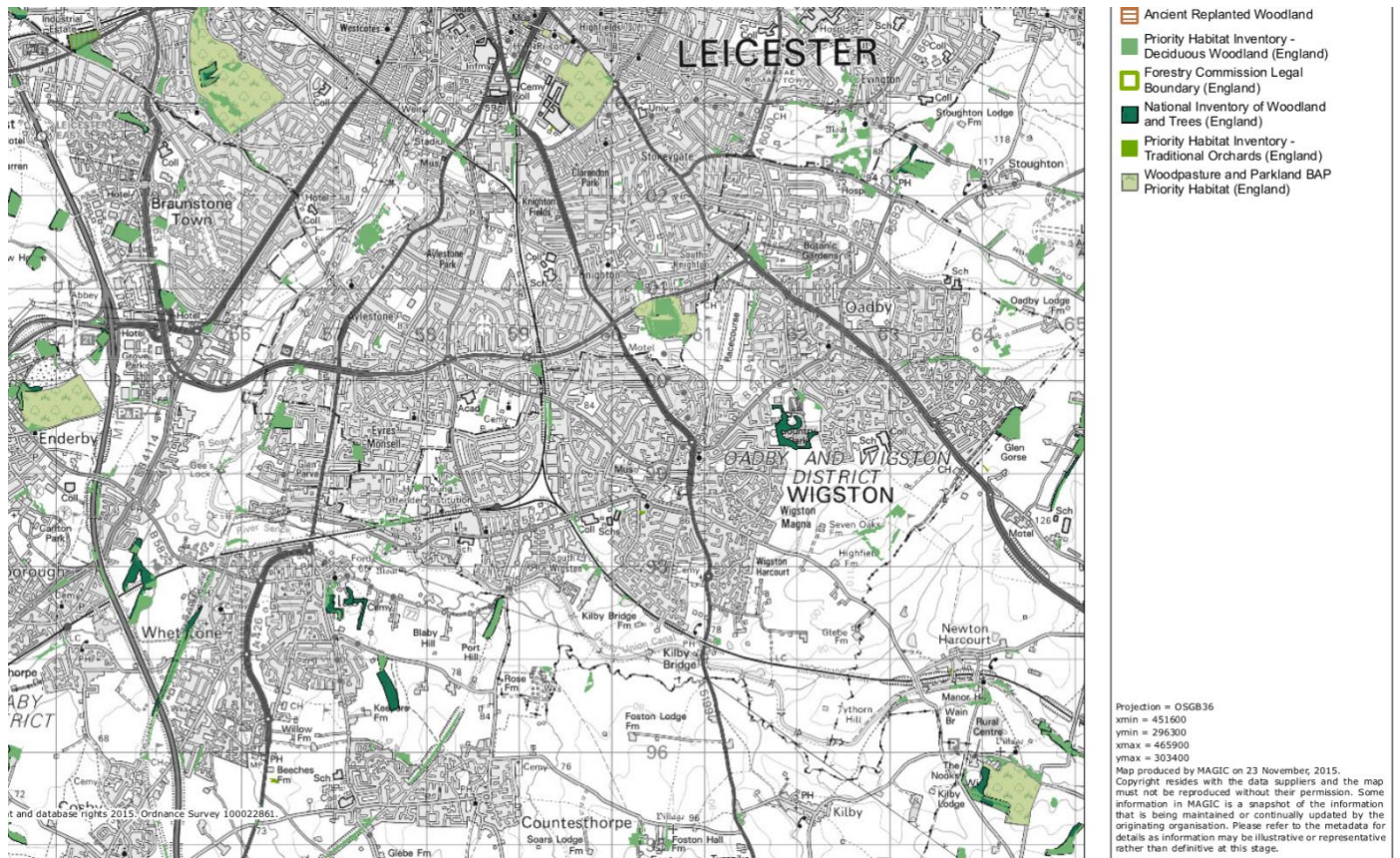
2.0 General assessment of current tree stock

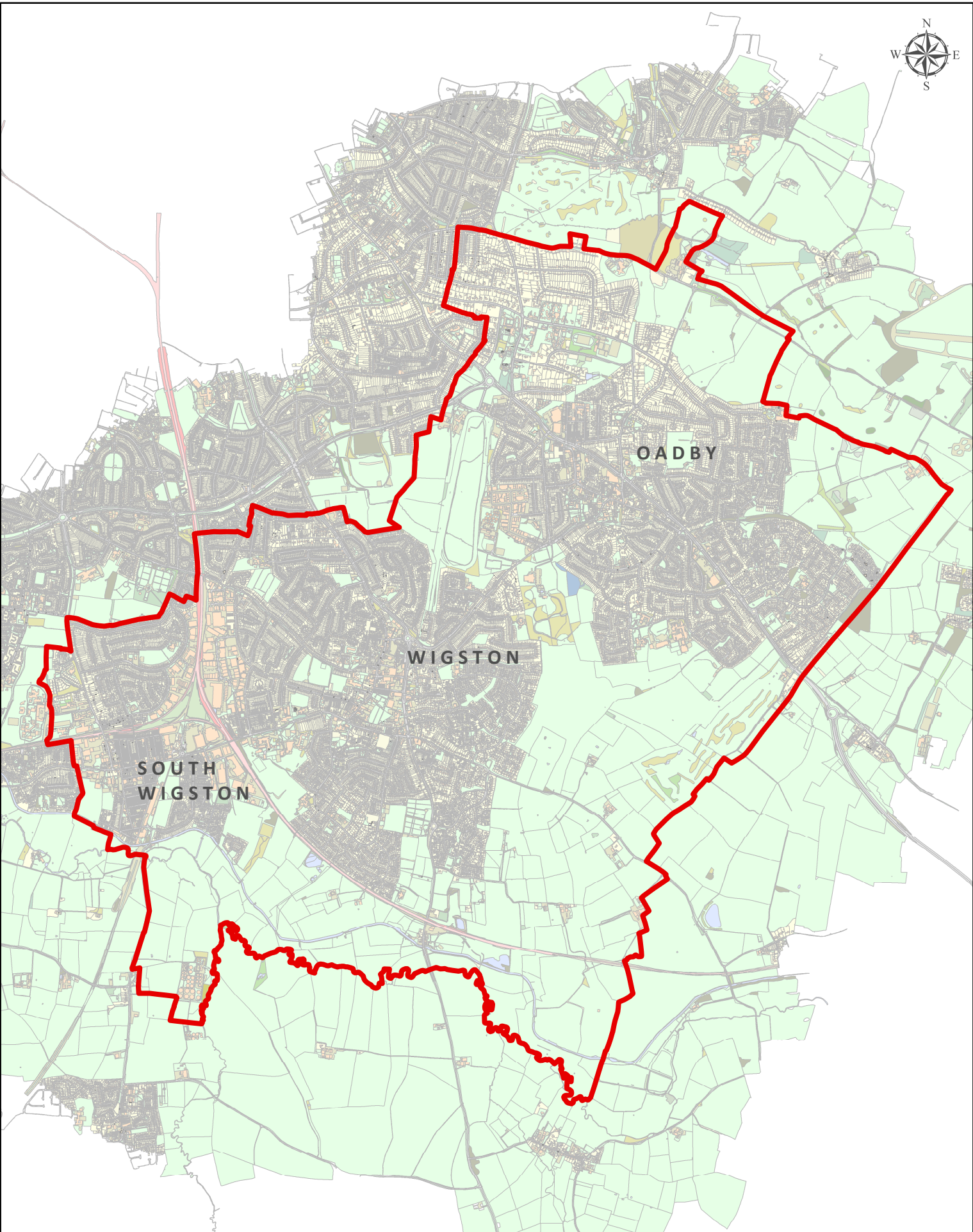
Woodland is a scarce resource in the Borough, well below the national average of 8%. None of the woodland is classified as ancient, but there is isolated semi-natural secondary woodland in the urban and rural areas. Substantial new woodland planting has taken place, in particular on Brocks Hill Country Park.

The ash tree is dominant in Leicestershire and is extensive throughout the Borough as hedgerow trees or mature woodland trees, and oak is predominant. There are opportunities for further tree planting within the towns, as identified by the Greening the Borough Strategy. There are a high proportion of veteran trees in the rural area and a network of hedgerows. The Council will be surveying trees on their own land over the next few years.

Hedgerows are a characteristic of the Borough, linking the town and countryside and creating wildlife corridors. The urban edge is well integrated into the landscape by hedgerows, trees and subtle changes in the landform which filter and limit views of the townscape from the open countryside.

Trees on Highway land are the responsibility of Leicestershire City Council and beyond the scope of this document.





3.0 The benefits of the current tree stock

Landscape

Trees are the largest living landscape feature and define the character, views and sense of place. They soften the visual impact of the edge of the towns when looking from the open countryside, which is particularly important on the southern edge of the Oadby and Wigston. Trees enhance the setting on the built environment (see photo 1), screen unattractive buildings and create 'vistas' to enhance an attractive view. Trees provide a sense of maturity for new developments and help blend new buildings into the landscape. They are an important component in creating a sense of place and many landscapes we admire and visit have a high tree population, and marking as they do, the passing of the seasons. However, not all trees are appropriate for their setting, and an understanding of the right tree, in the right place is important to make sure that tree has room to grow and does not cause a conflict.



Photo 1 of St Peter's Church, Oadby



Photo 2 trees marking the passing of the seasons

Ecological benefits

Trees individually provide significant ecological benefits and provide roosting, feeding and nesting for birds, food and habitat for insects, habitat and roosting for bats and hollow trees and provide a home for new mammals. Fungi, mosses, liverworts and lichens are a rich and complex part of our ecology. Many protected and rare insects and fungi are entirely dependent on old trees to survive. Dead wood (either fallen, standing or dead twigs) and general wood decay are essential for nutrient recycling which is important for soil health. Collectively, trees have added value as wildlife corridors for mammals, bats and birds. All trees provide ecological benefits, however some species have a higher ecological value than others. An oak tree, for example, can support over 270 different species. Generally, the older the tree, the more complex and diverse an ecological community it supports.

Ecosystem services

Trees intercept heavy rainfall and reduce flash flooding. They filter the air and removes various pollutants from the atmosphere. They cool buildings in summer and diffuse moisture loss and reduce wind speeds, therefore reducing heat loss in winter.



Photo 3 of woodland management and standing dead wood at Brocks Hill Country Park



Photo 4 of a yellow hammer at Brocks Hill Country Park

Our well-being

Walking outside amongst trees has been proven to make us feel better. This has been proved medically with research proving that blood pressure can be lowered, mild depression lifted and overall fitness improved. Trees can reduce the incidence of asthma as air is filtered. Stress-related illnesses are reduced not only by the calming effect of the looking at trees, but by the fact that attractive, well maintained public spaces with trees encourage walking, and, by association, incidental social interaction. Trees cast shade and may have a role to play in reducing skin cancer. Studies have shown that patients in hospital rooms with views of green space (in particular, trees), recover from surgery quicker than patients looking out onto buildings. A recent report from Faculty of Health states that:

‘Access to nature can significantly contribute to our mental capital and wellbeing’ and that ***‘Safe, green spaces may be as effective as prescription drugs in treating some forms of mental illnesses’***



Photo 5 of Brocks Hill Country Park

Cultural value

Trees – and in particular, veteran trees, are often linked to local events and customs.

Getting involved

Can you help us provide information on important local trees which are connected to a local story?
We would love to publish stories and pictures here.

Putting a value on trees

Recently, a number of methods to value trees have been developed to quantify their diverse roles, and assess how important they are to our economy, ecology and wellbeing.

i-tree eco

i-tree eco measures the urban forest structure, environmental effects and value to communities. This is calculated by using specialized software which processes information from tree surveys

(usually a number of plots within a town), together with meteorological data and air pollution. A number of studies have been carried out through the world. The largest study in the world was in London and was completed in early 2015. Preliminary findings are located at:- <http://www.forestry.gov.uk/london-itree>

Treezilla

Treezilla is a citizen science platform that aims to map every tree in Britain. Anyone can get involved, and the information will help populate the software on what 'ecosystem services' trees provide.

Getting involved

Take a photo, and provide details of a tree (with the owner's permission), and upload it to the map at:-

<http://treezilla.org>

CAVAT

Aside from the cost of buying, planting and looking after a tree, there are a number of methods for working out the financial value of a tree. The most recently developed system is CAVAT. This provides a method for managing trees as public assets, and provides a financial value for the tree; not to replace it, but as its value to the local area. The final figure is calculated from a number of variables, but, to summarize, the bigger, healthier and more accessible the tree is, the higher its value.



Photo 6 of a tree warden training session, in November 2015, on CAVAT and Treezilla. The value of this mature Austrian pine in Peace Memorial Park is calculated under CAVAT as £116,142.

4.0 Geographical assessment

Oadby & Wigston is a small, highly urbanised Borough, which adjoins the south-east edge of the City of Leicester. The total area covers approximately 9 square miles, and the built up area occupies just over 60% of the Borough, close to the City boundary. The council serves a population of approximately 56,170 residents. There are 15 parks and sports grounds and two large open spaces, and we believe these are essential to the well-being of residents, as well as providing ecological

benefits. The Grand Union Canal is an important landscape feature and leisure facility, as well as being of ecological benefit.



Photo 7 of Peace Memorial Park

5.0 Soil assessment

The soil type influences tree populations, particularly in rural areas. In urban areas, the top of the soil has often changed over the years of development and gardening. The scientific description of the soil type is found below:

The soil type is a slowly permeable, seasonally wet slightly acid, but base-rich loamy and clayey soil. The drainage is slightly impeded and the soil has a moderate fertility. The habitat type is a seasonally wet pasture with occasional woodland.

6.0 Biodiversity

The Biodiversity Audit 2005 found the following:

Hedgerows – there is no ‘typical hedgerow’, however a frequently occurring hedgerow is predominantly hawthorn with occasional blackthorn, elder and dog rose. Ash and English elm occurs as shrubby trees and standards, whilst oak is always a standard. The total length of the hedgerows recorded was 85km. Mature crack willow are a common feature with the hedgerows between the River Sence and Grand Union Canal. Several hedgerows, totaling 700m within the Borough, have been identified as being ‘species-rich’ (i.e. averaging at least 5 woody species per 30m)

Getting involved

The Tree Council have a 'Hedge Tree' Campaign which encourages tree tagging of saplings in the hedges to avoid them from being flailed. Contact The Tree Council for more information. Tree tagging must only be carried out with the owner's permission. The Tree Council has launched a Hedgerow Harvest initiative which seeks to reconnect people to this heritage of free local healthy food (<http://www.hedgerowharvest.org.uk/>) .

Woodlands – broad leaved plantation makes up the largest proportion of woodland character of the Borough. It is either young (less that 20 years old) or approaching maturity. Broadleaved woodland survives as scattered stands of a once large area, mostly confined around the Oadby area. The woodlands mainly comprise of oak, ash and beech with an under storey of hawthorn, holly, elder and blackthorn.

Stoughton Farm Park contains the only area of mixed plantation in the Borough and contains veteran, and potentially veteran oaks.



Photo 8 of the woodlands at Brocks Hill County Park

Getting involved

Oadby and Wigston Council have a number of events at Brocks Hill which you can take part in [http://www.oadby-](http://www.oadby-wigston.gov.uk/pages/what_is_happening_at_brocks_hill_visitor_centre_and_country_park)

[wigston.gov.uk/pages/what_is_happening_at_brocks_hill_visitor_centre_and_country_park](http://www.oadby-wigston.gov.uk/pages/what_is_happening_at_brocks_hill_visitor_centre_and_country_park) or 'like' their facebook page <https://www.facebook.com/BrocksHillCountryPark/?fref=ts>

The Tree Council encourage a Walk in the Woods and Seed Gathering Season to promote well-being, enjoyment of our local resources, and to gather seeds of local provenance.



Photo 9 of a woodland walk at Brocks Hill County Park



Trees of special interest – 185 trees were identified in the survey as being of special interest, and 112 were of veteran status. Ancient and other veteran trees are a vital and treasured part of our history, and our natural and cultural landscape, and Britain has the greatest number of ancient trees in northern Europe (source <http://www.ancienttreeforum.co.uk/>). Ancient and veteran trees are a unique host to some protected species (such as the violet click beetle). An **ancient tree** is generally low, fat, squat (because the crown has reduced in size through age), and has a wide trunk which is often hollow. A **veteran tree** shows ancient characteristics. A **heritage tree** is linked to a local event, history or local person, or is botanically scarce. **Notable trees** are memorable, usually due to their size and/or setting. They need not be veteran. Finally **Champion trees** are the largest of the species in a particular area.

Getting involved

Veteran Trees can be recorded on the ancient tree hunt website <http://www.ancient-tree-hunt.org.uk/>. Seek the owner's permission before entering land and uploading tree data.

Getting involved

The Tree Council have a National Tree Week (NTW) in late November/early December every year since inception in 1975. In the 40th year of NTW the council aim to plant one million trees. Their website <http://www.treecouncil.org.uk/Take-Part> provides a wealth of detail on how to take part.



Photo 10 having fun den building at Brocks Hill County Park

7.0 How trees grow

Trees grow taller by growth from new cells from branch tips. As they mature the trunk and branches get wider and the crown forms a network of sub-divided branches. They obtain their energy from sunlight which creates photosynthesis. The trees give out oxygen, and take in carbon dioxide as part of this process. The roots are woody and taper out to the edge of the crown. These roots subdivide and fine feeder roots take up water and nutrients, and carry out gaseous exchange. Roots often have a helpful relationship (symbiotic) with beneficial fungi (mycorrhizae) which help them gather more water and nutrients from a wider area. Most tree roots are within the top 1.5m, sometimes as shallow as 0.6m. Tree roots are damaged by trenching, soil compaction, and raising or lowering the ground. The effects of damage do not usually show for a few years, unless the damage is so severe that the tree blows over.

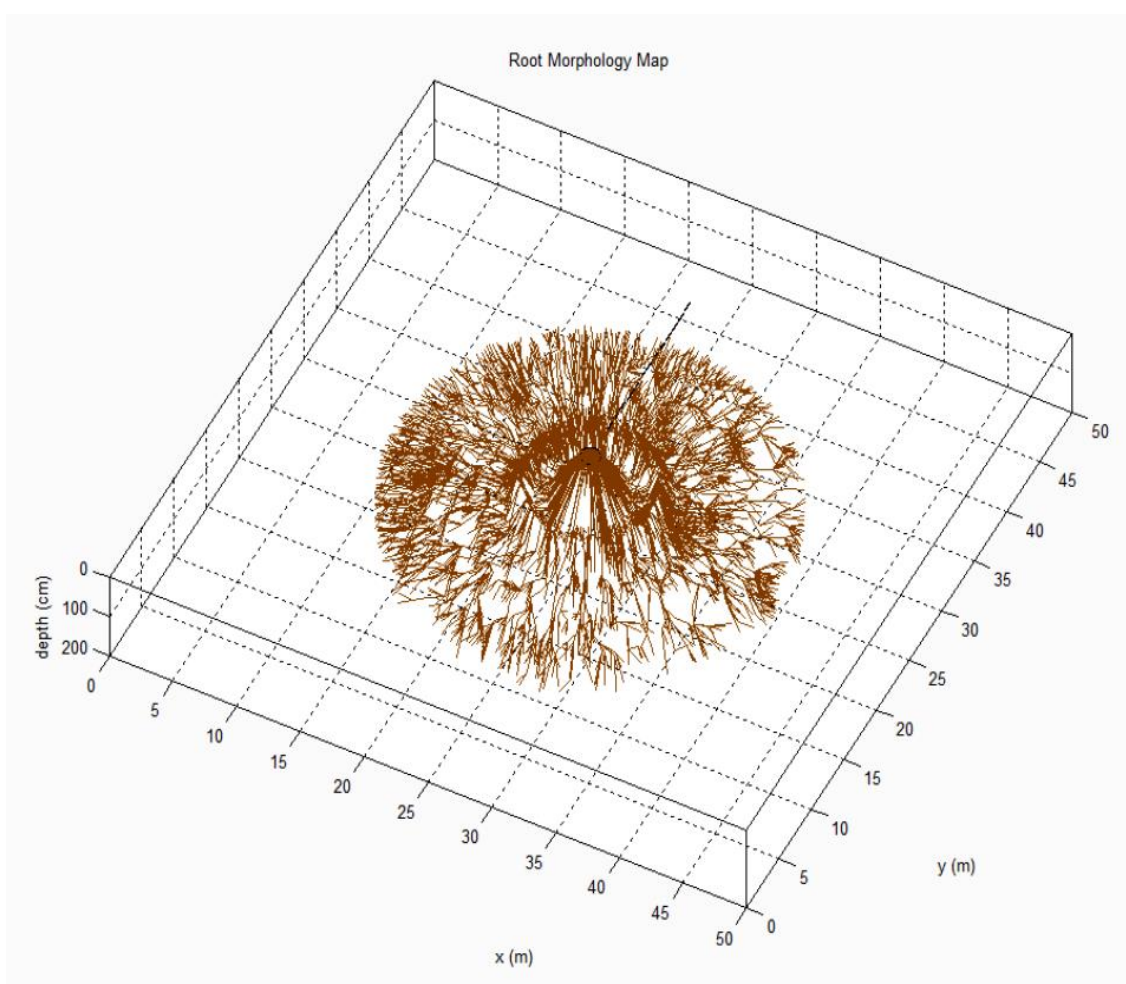


Figure 2 – Root morphology map of a large mature oak tree using ground penetrating radar (TreeRadar). Sharon Hosegood. For further details see

<http://www.bbc.co.uk/programmes/b0619k6l>

Getting involved

Can you help us find the largest tree in the Borough?

8.0 Pests and diseases

The number of pests and diseases affecting trees in the UK has increased rapidly in the UK. This is due to a number of factors, some of which are the subject of current research. Climate change, increased transportation and mobilization of pests during cargo transport are some factors. Extremes of weather, especially hot, dry summers, can make trees more susceptible to disease. The effect of a pest or disease that only affects one tree species can have a big impact on the landscape, especially in areas where only one species is dominant. In future planting, we should aim to provide a mix of species to build resilience in the landscape.

There are three main pests and diseases; fungi, bacteria and insects. Tree health is a complex matter and trees have evolved to have a good and helpful relationship with many fungi and insects (for example, pollution). If in doubt, seek advice from a tree expert.

The Forestry Commission has a helpful website on pests and diseases which is found at:

<http://www.forestry.gov.uk/pestsanddiseases>

Current diseases of concern are:

Chalara dieback of ash

This is a fungal disease in trees which causes leaf loss, crown dieback and often death; either by weakening the tree to other pests and diseases or by directly killing. There is no treatment, so the approach is to slow the spread of the disease. This has been carried out by destroying young and newly planted trees, with mature trees being retained for wildlife and landscape reasons. The loss of ash in Oadby and Wigston Borough would have a big impact on the landscape, therefore new planting should be of a different native species, such as oak, field maple, hornbeam or lime.

Massaria Disease of London Plane trees

The disease, commonly known as Massaria disease, infects branches of plane trees. The fungus has usually been considered to be a weak parasite causing only minor damage such as twig dieback in warmer Mediterranean climates. However, in the 21st century it has been found associated with branch death and rapid decay within other parts of Europe.

The disease seems to be specific to the London plane, the Oriental plane and the Occidental plane, and the disease causes large lesions on the upper sides of branches associated with branch drop

Acute oak decline

This condition affects several thousand oak trees. It is characterised by dark fluid oozing from cracks in the bark, rapid decline of the tree and death. Often, it is associated with D shaped exit holes in the bark from a wood boring insect.

This list is not exhaustive, and is ever changing. The Council will continue to actively monitor and manage the trees in Oadby and Wigston Borough with regard to different tree disease that may occur, and will remain vigilant in identifying new diseases.

9.0 Climate change and adaptation

Climate change is a serious threat to all forests, woods and trees. Extreme weather events affect tree stability and health. Some diseases lie latent in the tree and infect the tree when it is stressed. Climate change will affect woodland habitats and the species they support by affecting life cycles, altering the relationships between species.

Increased woodland planting may help mitigate some of the negative impacts of climate change by protecting soils from erosion, reducing the likelihood and impact of flash flooding, and supporting biodiversity. It can also contribute benefits to other land uses, providing shade and shelter to livestock, improving water quality and flows, and making urban environments more habitable.

10.0 Building damage

Trees can cause damage to buildings in the following ways:

- Direct damage
- Indirect damage

Direct damage – this is caused by the direct action of growing roots pushing against a structure, or lifting a pavement. This normally happens close to the trunk where the base of the trunk and the thickest branches. When planting new trees close to buildings, walls and footpaths allow a suitable distance from the tree; at least the distance from the eventual crown spread of the trees plus 2m as a rough guide. For further guidance, speak to an arboriculturist or a landscape architect.

Indirect damage – This is known as subsidence and occurs on a shrinkable soil (such as a heavy clay) when trees take moisture out of the ground underneath the foundations and cause the ground to shrink. The amount of subsidence is dependant on a number of factors: soil type (how ‘shrinkable’ it is or, ‘the plasticity index’), how dry the soil is, the type of tree, the size of tree, and its water demand classification (as per table 12 in NHBC Chapter 4.2 ‘*Building near trees*’), the distance between the tree and the building and finally, the type of foundation. Tree related subsidence causes a seasonal variation in building movement, with the ground shrinking in summer (and the cracks opening) and re-wetting in winter (the cracks close, or reduce). The way this is measured is by level monitoring (to see if the ground rises and falls over the seasons) and crack monitoring (to see if the cracks open in summer and close in winter). Soil samples and root analysis is carried out. It can take only a few fine roots to cause subsidence and it can be from some distance from the tree. The analysis of the cause should be a combined approach by and

engineer, soil laboratory analysis and an arboriculturist. Subsidence can be caused by non-tree related causes (such as faulty drains) therefore a full 12 months analysis to see if there are any seasonal variations is important.

11.0 **Design, planning and development**

Sensitive design, stemming from policy on both land allocation and development control, can provide opportunities for good tree care and new planting. Conversely, poor design can lead to unacceptable tree loss, and contribute to how a lack of vision can erode landscape character and a sense of place.

The council expects to see a full tree report (an Arboricultural Impact Assessment) with a planning application (to BS 5837:2012 '*Trees in relation to design, demolition and construction. Recommendations*' (BS)) on site where there are trees. This includes offsite trees close to the boundary. The quality of the tree population and the constraints they pose should be considered at a very early stage in the design process. The council will consult their arboriculturist on their professional opinion on whether the detail is sufficient, and in accordance with the BS, so as to make a recommendation on whether an application is harmful to the visual amenity of the area. This does not mean that all trees should be retained. Low quality trees, trees in decline, diseased, or providing low visual amenity, would not normally be retained. Higher quality trees would normally be retained, unless there is an overriding justification for development.

Development is an opportunity for new planting and this should be considered at the earliest stage to be an integral part of the design and how the site will function. It is important to consider the eventual size of the mature tree to avoid conflict. Planting in groups is generally more visually and ecologically effective, more likely to be sustainable, with the resultant effect that the trees more likely to survive. A mix of species is ideal to ensure variety of texture, colour and seasonal interest, whilst also ensuring that if a pest or disease that affects only one species takes hold, the entire population is not affected as a result. Native species are generally favoured in the countryside, with a mix of native and non-native in urban areas. Reference should be made with the councils Landscape Character Assessment to ensure that the planting scheme is in keeping. A suitable distance between trees and new buildings should be calculated by a landscape architect or arboriculturist to ensure that the risk of damage (direct or indirect) is greatly reduced and that the tree does not cast an unreasonable amount of shade to the new building or present a nuisance in other ways.

Trees can be supplied in a variety of sizes, from cell grown (less than 30cm tall) through to semi-mature. Younger trees tend to be more successful in establishing than large trees, although there

are excellent products on the market to aid successful tree establishment. Trees supplied as bare root can only be planted between October – March, whereas container grown trees can be planted all year round. Aftercare is absolutely critical to success, and the three basic points to consider are ‘watering, watching and weeding’. Keeping a tree well-watered in dry periods in the growing season, and making sure that a 1m wide circle around it is kept clear of weeds and grass for up to three years is one of the most important things. Mulching with 7 – 8cm deep of matured woodchip also keeps moisture in and weeds down. A low stake (a third of the height of the clear stem) and rubber tie will keep the tree upright until established, but the tie must be loosened as the tree grows. A stake too high (up to the height of the trunk) will prevent the trunk from growing strong. Any weak branches, or branches growing too low on the trunk should be pruned off when the tree is young. Excellent advice on tree establishment is found in BS 8545 ‘*Trees: from nursery to independence in the landscape. Recommendations*’.

12.0 Tree surgery and woodland management

The British Standard relating to Arboricultural work is BS 3998: 2010 ‘*Tree Work – Recommendations*’. Trees are generally pruned for safety reasons (to remove dead or dangerous branches), or to provide room for people or buildings. Occasionally trees are pruned to reduce the risk of structural defects causing a collapse. Fruit trees are pruned to encourage new fruit. Wounds should not be painted and any cuts should be made to suitable growing points to the branch collar. Tree work is a skilled and dangerous operation and a use of a competent, insured and qualified tree surgeon is recommended. A list of tree surgeons approved by the Arboricultural Association is found at www.trees.org.uk

Definition of Tree Terms

Tree Felling

Felling is defined as the cutting down of a tree or shrub to leave a stump to a certain height. If the stump is to be left, then it should be at least 30cm to prevent a trip hazard. The stump will need to be treated with stump killer to prevent re-growth. Alternatively the stump can be ground out.



Photo 11 tree works at Brocks Hill County Park

Coppicing

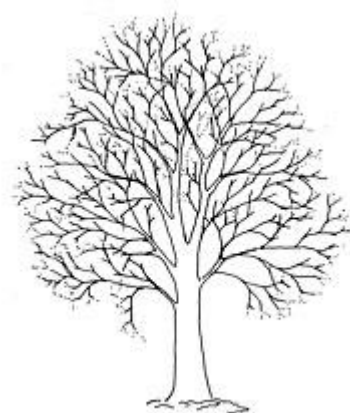
This traditional woodland management technique is carried out by cutting down to about 30 – 60cm high to produce multiple shoots which are re-coppiced every 7 – 15 years depending on species and the management objective. Not all broad leaved trees respond well to the treatment. Species that have been traditionally coppiced are hazel, willow, small leaved lime, hornbeam and ash.

Pollarding

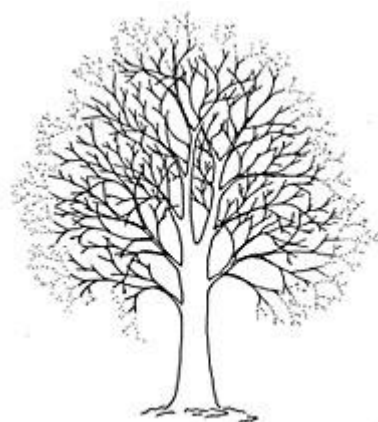
This is the traditional practice of cutting the crown back to a height of 2 – 3m to allow the ‘poles’ to re-grow, and was a useful technique when managing farms. It usually promotes longevity, and some of our oldest trees have been managed as pollards. Many urban limes and planes are managed as pollards in streets. Pollards need to be first cut when the tree is young, and the cycle repeated every 5 – 10 years depending on rate of growth, management objective, and species. Not all species pollard successfully and pollards that have not been cut for a long time might need to be managed by a crown reduction rather than pollarding, to avoid too much of a shock for the tree. This needs to be assessed by an arboriculturist.

Crown Thinning*

Crown thinning is the removal of a proportion of the small secondary live woody growth (in addition to weak, damaged, dead, crossing or duplicated branches and soft growth) to reduce the leaf area of the canopy by a percentage. This reduces the density, but often the tree 'fills in the gaps' within a couple of years.

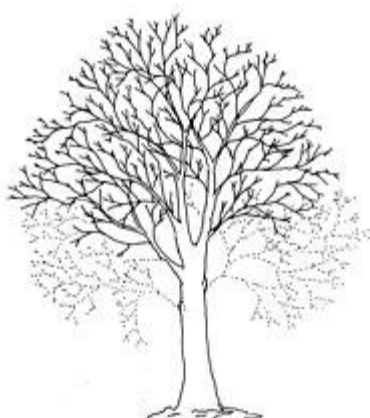


Crown Reduction*



Crown reduction is the reduction of the canopy, from the tips of the branches towards the main trunk, by pruning growth to an appropriately sized lateral branch, twig or bud to leave a flowing silhouette. It is described as a measurement in metres (e.g. between 1 – 1.5m to suitable growing points). Only a modest amount of crown reduction is appropriate to avoid creating large wounds and causing stress to the tree. Ideally crown thinning and crown reduction should take place midsummer or mid-winter. Frosty weather and hot scorching sun should be avoided when carrying out work. Cherry trees are best cut in August to avoid silver leaf disease. Some species tolerate pruning better than others. The advice of an arboriculturist should be sought.

Crown Lifting*



Crown lifting is the removal of lower branches to a specified height to provide clearance. The illustration denotes the maximum acceptable amount of crown lifting, any more makes the tree top heavy and less stable, and would result in large wounds on the trunk. It is best to crown lift a tree when young to avoid making large wounds.

Formative Pruning

Formative pruning is defined as the pruning of the aerial growth of a tree in its youth, to result in an appearance considered typical for the species or variety of tree concerned. The object of formative pruning is to produce a clean stemmed tree and the establishment of a good branch structure and canopy by the removal of a number of small branches leaving therefore only small, quickly occluding wounds. Root pruning may also be undertaken as part of formative pruning.

Cleaning out

Cleaning out is the removal of dead, dying or diseased branch wood, broken branches, or stubs left from previous tree surgery operations, together with all unwanted objects.

Dead-wooding

Dead-wooding is defined as the removal from the tree of dead, dying or diseased branch wood, broken branches or stubs left from previous tree surgery operations and from within any cavities within the tree.

** Illustrations courtesy of European Arboricultural Council*

13.0 Trees and the law and best practice

There are two distinct forms of law affecting trees. These are Statute and Common Law.

- Statute Law Acts of Parliament e.g.: the Town & Country Planning Act 1990.
- Common Law - Decisions of judges in Courts of Law.

Tree Preservation Orders (TPO)

Any species and size of tree, or trees, can be protected by a TPO. The order can protect individuals, groups, woodland and areas, but the order must be "*Expedient in the interests of amenity to make provision for the preservation of trees*". Everyone has a right to object to an order within 28 days of it being served. Appropriate works can be carried out to protected trees provided consent is granted by the council. Anyone can apply to carry out works, but it is helpful, and sometimes essential, to seek professional advice from an arboriculturist. The form and guidance notes are found at: http://www.oadby-wigston.gov.uk/pages/works_to_trees_in_a_conservation_area_or_subject_to_a_tree_preservation_order

Applications take 8 weeks to process and there are usually conditions and informatives placed on any consent. There is a right to appeal to the planning inspector if the application is refused, or against any conditions attached to the consent. Information on what is needed in an application form is found at our website link above.

The TPO is in the Part VIII of the Town and Country Planning Act 1990, and in the Town and Country Planning (Trees) Regulations 1999 and more recently, Town and Country (Tree Preservation) (England) Regulations 2012

TPOs prohibit the cutting down, uprooting, topping, willful damage or destruction of trees, groups of trees, or woodlands, without the consent. Consent is required before works can take place. An application to carry out work is required and the council have eight weeks to process. The form is found at http://www.oadby-wigston.gov.uk/pages/works_to_trees_in_a_conservation_area_or_subject_to_a_tree_preservation_order

Exemptions in the Act

- Tree(s) that are are dead or dangerous (5 days written notice is required).
- Woodlands subject to Forestry Commission Felling Licence or Grant
- Works to facilitate planning permission, providing all pre-commencement conditions have been discharged.
- Act of Parliament e.g. Highways Act, Railways Act
- Rights of statutory undertakers (Electricity/gas/water/telecommunications)
- Nuisance - must be actionable - causing actual damage.
- Fruit trees – cultivated for fruit production

Penalties

Any person who:-

- Cuts down, uproots or willfully destroys a tree, or
- Tops, lops or willfully damages in a way that is likely to destroy it, is guilty of an offence. Anyone found guilty of this offence is liable if convicted in the Magistrate's Court to an unlimited fine. In serious cases a person may be committed for trial in the Crown Court.
- A tree replacement notice can also be served.

Conservation Areas

The law relating to Conservation Areas (CA) is in Part II of the Planning Act (Listed Buildings and CA) Act 1990. Trees in Conservation Areas are often a very important feature and contributes to the overall character of the area. The council requires six weeks' notice of intent to carry out work, including pruning. The council can either raise no objection (and cannot place any conditions) or if it considers the work to be harmful to the tree of visual amenity, it must serve a TPO. The same exemptions apply and this legislation on applies to trees with a diameter greater than 75mm at 1.5m from the ground, or 100mm if it is for silvicultural thinning.

Felling Licenses and Woodland Grant Schemes

Forestry Commission (FC), are required to promote the interests of forestry and the supply of timber whilst balancing the effect on nature and landscape conservation.

Felling Licenses take 13 weeks to process and the form and information is found at: <http://www.forestry.gov.uk/forestry/infd-6dfkxf>

Brocks Hill Country Park is under a Forestry Woodland Grant Scheme

Exemptions are not required

- For felling trees with a diameter not exceeding 80mm at 1.3m from the ground or in the case of thinning, below 100mm or in the case of coppice or under wood, below 150mm in diameter.
- For the felling of trees in an orchard, garden, churchyard, or public open space. Note that country parks are not exempt.
- For pruning works to trees.
- For the prevention of danger or the abatement of a nuisance.
- For the felling of trees in compliance with statutory requirement
- For the felling of trees at the request of the Electricity utility company
- For felling of trees required to facilitate planning permission, providing all pre-commencement conditions are discharged
- If the felling is in accordance with an approved plan of operations under the Forestry Commission Woodland Grant scheme
- Felling of up to 5m³ of timber provided no more than 2m³ is sold in any three months (calendar quarter). There is a useful timber volume calculator on the Forestry Commission website.

Common Law Issues

Trees and Boundaries

Overhanging branches may be cut back to the boundary line, and in theory, should be offered back to the owner. This can often be the cause of dispute between neighbours, therefore try to discuss this with the owner first. If a large tree is growing close to the boundary, common law allows for cutting back to the boundary line, however, this will make the tree lopsided and create large wounds, possibly leading to instability, or death to the tree concerned. If the tree is protected by a TPO, or in a Conservation Area, consent is needed to carry out the work.

Roots may also be pruned back to the boundary under Common Law, but it is possible that such work might harm the tree and make it unstable. Advice from an arboriculturist should be sought.

If the tree is protected by a TPO, or in a Conservation Area, consent is needed to carry out the work (including root pruning).

Responsibilities of Tree Owners

Tree owners have a duty to take reasonable care for the safety of those who may come within the vicinity of a tree, or any property nearby. The courts state the standard of care is that of 'the reasonable and prudent landowner'. The tree owner is not expected to guarantee that the tree is safe (trees are living organisms and prone to disease and subject to extreme weather events). However a tree inspection regime, proportionate to the scale of the land/trees/number of people is good practice. Any defects found should be addressed accordingly. Further details are found at <http://www.forestry.gov.uk/safetreemanagement>

The Legislation affecting this is the Occupiers Liability Act 1957 and 1984 for all tree owners, and in addition the Health and Safety at Work Act for public and commercial land.

Local Government (Miscellaneous Provisions Act) 1976

Section 23 of this act gives a Local Authority powers to enter private land to make a tree safe that is considered to be in imminent danger of causing harm to persons or property. It is generally a rarely used legislation and matters are usually resolved by negotiation.

Hedgerow Regulation 1997

Under the Hedgerows Regulations 1997 (51 No. 1160):

- It is against the law to remove most countryside hedgerows without permission.
- To get permission to remove a hedgerow, you must apply to your local planning authority.
- If the Council decide to prohibit removal of an important hedgerow, it must let you know within 6 weeks.
- There is a set of criteria that a hedge must meet to be protected by this legislation.
- If you remove a hedgerow without permission (whether it is important or not) you may face an unlimited fine. You may also have to replace the hedgerow.

Further information is found at

<http://www.planningportal.gov.uk/permission/commonprojects/highhedges/>

The Office of Public Sector Information website provides full wording of the Hedgerow Regulations.

Anti Social Behaviour Act 2003 (Part 8) and the High Hedges (appeals England) 2005

Provided neighbours have tried and exhausted all other avenues for resolving a hedge dispute, people are now able to take their complaint about a neighbouring evergreen hedge to the council.

A high hedge is defined as ‘a line of two or more evergreen, or semi-evergreen, trees or shrubs which are two or more metres in height’.

Our role is not to mediate or negotiate between the complainant and the hedge owner, but to adjudicate on whether the hedge is adversely affecting the complainant's ‘*reasonable enjoyment of their property*’. In doing so, the council will take account of all relevant factors and strike a balance between the competing interests of the complainant and hedge owner, as well as the interests of the wider community.

If the council consider the circumstances justify it, it will issue a formal notice to the hedge owner which will set out what they must do to the hedge to remedy the problem, and when by. Failure to carry out the works required by the authority is an offence which, on prosecution, could lead to a fine.

Oadby and Wigston Borough Council charge £450 for this service. Please see the Council's website at http://www.oadby-wigston.gov.uk/pages/high_hedges

14.0 Policy context

Oadby & Wigston Borough Council's (OWBC) adopted Core Strategy 2010

Investment in the Borough's Green Infrastructure has enhanced biodiversity and created a stronger understanding within local people about their role in the conservation of habitats and species, and the links with the urban environment. (Core Strategy 2010 section 4.12),

Spatial Objective 12: Protecting and Enhancing Green Infrastructure

Development should be respectful of the natural environment, landscape and townscape character and contribute towards Biodiversity Action Plan targets of protecting, creating, managing and enhancing important habitats and green assets. Due to the predominantly urban nature of the Borough, to ensure that new development includes proposals to enhance the landscape and biodiversity, for example, through planting trees, creating ponds and other natural habitats.

Policy 5 – Green infrastructure. Veteran trees, trees of special interest, hedges and woodlands have been identified through the Phase 1 Habitat Survey and the Biodiversity Audit (2005) as a key component of Green Infrastructure (see section 7.0 Biodiversity for further details).

Core Strategy Policy 14 - Design and Construction

Proposals for new development and major refurbishment will need to demonstrate how the proposed development will provide opportunities to promote biodiversity

Oadby & Wigston Borough Council's (OWBC) Local Development Scheme 2014

This sets out the process for the review of the Oadby and Wigston Local Plan last reissued in 2013. The following two policies have been saved by Direction of the Secretary of State.

LANDSCAPE PROPOSAL 12: [OLP]

A tree planting scheme to improve the boundary of the green wedge adjacent to the water reclamation works and the Borough depot will be prepared, and implemented by the Local Planning Authority.

LANDSCAPE PROPOSAL 13: [OLP]

The Local Planning Authority will enhance and improve the appearance of the built edge of Oadby between Hidcote Road, Belper Close, Oxted Rise, Broxfield Close, Briar Meads and Tilton Drive by a scheme of tree and hedge planting in the Oadby/Leicester/Wigston green wedge.

OWBC - Nature Conservation Strategy 2007-2017

The strategy discusses the integral role that trees, hedgerows and woodland play in the Nature Conservation value of the Borough. It discusses the critically importance of the two Green Wedge areas within Oadby and Wigston in defining the form and direction of urban growth, providing links to the open countryside, recreational facilities, and, as an attractive feature. Trees and hedgerows create the landmarks within Green Wedges. The collective importance of our seemingly fragmented urban habitats (such as cemeteries, gardens and allotments, parks and school grounds) is recognized, and is a point of focus for the review of the Biodiversity Action Plan (objective 1.3 of the Strategy). The objectives of the document are nearly all relevant to trees, either directly or indirectly. Of particular relevance is the following:

Objective 2.1

To work in partnership with Leicestershire County Council to work towards the establishment of a South Leicestershire Community Forest.

Objective 4.3

To continue to support the Volunteer Tree Warden Scheme

OWBC - Landscape Character Assessment

This divides the Borough into different Landscape Character types defined by the nature of the habitat, townscape, and farmed landscape. It provides a detailed analysis of character, strengths, weaknesses, opportunities and threats. Full details are found at

http://www.oadby-wigston.gov.uk/pages/landscape_character_assessment

Of particular relevance is the following policy:

BW/1

Protect the existing positive contribution made to the urban character by trees and identify opportunities to increase tree cover.

- ***BW/1/a – Encourage formal street tree planting***
- ***BW/1/b – Encourage informal street tree and garden tree planting***
- ***BW/1/c – Increase the contribution of urban fringe trees to the landscape character.***
- ***BW/1/d – Improve the contribution of green frontages and open space to Landscape character and biodiversity***

OWBC - Green Infrastructure Plan March 2012

This document identifies components of Green Infrastructure planning and provides an evidence base for the emerging Local Development Framework. Veteran trees, urban trees, woodlands and hedgerows are recognized as an important component of the Green Infrastructure Plan.

The strategy recognizes the fact that any new tree planting to extend the existing woodland areas of the Borough will improve the townscape. This includes planting some of the wider grass verges near woodlands. There are no woodland areas within Wigston and the strategy discusses various impetuses for new woodland planting; from agri-environment schemes to new development. The strategy identifies areas for new tree planting and a timescale for delivery (2014 – 2026)

Space4trees

Is the East Midlands' first Regional Forestry Framework which sets out the approach to the issues and opportunities that face our trees and woodlands. It has been developed as part of the region's Integrated Regional Strategy. The strategy has a series of objectives found at [http://www.forestry.gov.uk/pdf/space4trees_stage3_doc.pdf/\\$FILE/space4trees_stage3_doc.pdf](http://www.forestry.gov.uk/pdf/space4trees_stage3_doc.pdf/$FILE/space4trees_stage3_doc.pdf)

OWBC - Greening the Borough strategy 2012 – 2022

This is a diverse series of initiatives that:

- creates a more attractive Borough;
- leads to a place people choose to live, work and visit;
- gives people an opportunity to play a part to improve and care for local natural open spaces;
- attracts participation, interest, and celebrates local distinctiveness;



Aim 1 - To improve the interest and impact of highway verges through enhanced maintenance, colourful and interesting planting, and an increase in the amount of trees and shrubs.

Aim 4 – Entrance points to the borough shall be of a high quality and interest and give a clear indication that the borough within is one that takes great pride in itself. This raised standard will be continued along the main highway routes with imaginative planting schemes, tree planting and areas of distinction.

Aim 6 - To increase the number of trees on public property, and to seek to reverse the trend of removing trees from gardens which has had a detrimental effect on the appearance and ecology of many streets.

15.0 Tree wardens

The Tree Council is the UK's lead charity for trees, promoting their importance in a changing environment. Their vision is one; of more trees in streets, parks, hedgerows and woodland across the UK, bringing benefits to people and wildlife, enhancing landscapes and engaging people in biodiversity and environmental issues. They work in partnership with our volunteer Tree Wardens, schools, communities, organizations and government to make trees matter to everyone.

Tree Wardens are volunteers, usually appointed by parish councils or other community organisations, who gather information about their local trees, get involved in local tree matters and encourage local practical projects related to the trees and woods. The Oadby and Wigston Borough Council's Tree Warden Scheme is part of the wider Leicestershire Tree Warden Scheme and seeks to involve local volunteers in championing and managing their local trees and to meet

locally with like-minded people for training, field trips and practical activities. To support this, the Council runs training events locally, supporting the volunteers wherever possible, and in whatever way appropriate. This will include providing information on changes to legislation and current research on new pests and disease alerts. The most recent training was on CAVAT on 23 November 2015 in the Peace Memorial Park.

Getting involved

For more information about joining the tree warden scheme see http://www.oadby-wigston.gov.uk/pages/volunteering_with_the_tree_warden_scheme

Getting involved

Record your local trees on the Treezilla website. The more records we have, the easier it is to quantify the benefits of the trees. The following description is from their website:

What is Treezilla?

Treezilla is an exciting new platform for citizen science that everyone from school children to university students and the general public can get involved with. The idea is to map every tree in Britain. This will create a data-rich platform on which a wide range of citizen science investigations can be built.

Getting involved

The Pride of the Borough Group is an umbrella group, working with the council to organize our entry into East Midlands in Bloom. The group was formed in 2004 and aims to improve the environment, working with the council and others and encourage and support relevant community activities. Further operations details are found in Appendix one. Contact details are found on the website http://www.oadby-wigston.gov.uk/pages/pride_of_the_borough1.

16. Tree Strategy Policies

Overall policies

Policy 1 – we will develop the tree population. The tree stock will be expanded with new tree planting where appropriate and practicable.

Policy 2 – we will provide and maintain a high quality and sustainable tree stock. Native species will be planted to maximize indigenous flora and fauna, particularly, but not exclusively, in rural areas. A diversity of species will be established to mitigate against pests and disease that can threaten entire species.

Policy 3 – we will provide and promote the highest standards of tree care to the British standard BS 3998: 2010 ‘*Tree Work – Recommendations*’ as well as adopting relevant arboricultural legislation and research development.

Policy 4 – we will resist the unnecessary removal of trees unless there are justifiable arboricultural, planning or legal reasons. (If you own or you buy a property, then the nearby and valued trees and your responsibilities towards those trees are all part of that same property).

Policy 5 – we will continue to run the tree warden scheme, but incorporate this within the councils Volunteer Policy and Procedure (when adopted)

Council owned trees

The council own trees in parks, cemeteries, allotments and country parks. We will:

Policy 6 - Take all reasonable steps to fulfil duties and obligations to ensure tree safety for public and property.

Policy 7 – carry out replacement planting when a tree is removed. The replacement planting location and species of tree will be assessed.

Policy 8 – The council will not normally undertake any tree pruning works or removal of trees in direct response to any natural or seasonal phenomena, for example:

- a. falling leaves;
- b. sap exudation, (honeydew);
- c. falling fruits, nuts or seeds;
- d. bird droppings;
- e. blossom or pollen;
- f. reduction or increased moisture to gardens;
- g. germinating seeds from council owned trees;
- h. blocked or obstructed drains, gutters, flat roofs from tree deposits and leaves; or
- i. presence of algae, moss build up.

Policy 9 – The council will not normally undertake any tree pruning work due to:

- a. Loss or interference with TV or satellite signal reception;
- b. Loss of sunlight or man-made lighting during any part of the day;
- c. Damage or “heave” to adjacent surfacing due to a nearby tree;
- d. Blocking or obstruction of a view from a residence.

Policy 10 – The council will not normally prune trees to avoid shading solar panels.

Policy 11 – The council will not remove or prune a tree even if someone is willing to pay

Policy 12 - Where birds are found to be nesting in trees, tree works will normally be delayed until the end of the nesting season, or the birds have fledged (whichever is sooner).

Policy 13- Any trees identified and confirmed to be supporting roosting bats will not be worked on until Natural England is consulted. We will then act upon the advice given to us.

Policy 14- When investigating claims of subsidence/heave and damage to properties from underground tree roots evidence will be required from claimants by way of a report from an appropriately qualified person. The report should discuss the following.

- a. A description of the property, including a description of the damage and the crack pattern, the date that the damage first occurred/was noted, details of any previous underpinning or building work, the geological strata for the site identified from the geological map.
- b. Details of vegetation in the vicinity and its management since discovery of the damage. Include a plan showing the vegetation and affected building or surfacing material.
- c. Measurement of the extent and distribution of vertical movement using level monitoring.
- d. A profile of a trial/bore hole dug to identify foundation type and depth of soil characteristics
- e. The sub-soil characteristics including soil type (particularly that on which the foundations rest), liquid limit, plastic limit and plasticity index.
- f. The location and identification of roots found. Where identification is inconclusive, DNA testing should be carried out.
- g. Proposals and estimated costs of options to repair the damage.
- h. A report from an Arboriculturist to support the tree work proposals, including arboricultural options for avoidance or remediation of indirect tree-related damage.

In the case of other structural damage to garden walls, drains, paving, drive surfaces, technical evidence should be provided by a relevant engineer, Architect, building/drainage surveyor or other appropriate expert. Removal of the tree may not be the only appropriate option.

Policy 15- We will continue to develop opportunities to use the woodchip, logs, timber from our own tree works.



Photo 12 council owned copper beech enhancing the local setting

Woodland management policies

Policy 16 - We will take reasonable steps to preserve and enhance woodland trees, particularly those that are indigenous to the area served by Oadby and Wigston Council. We will work with other towards the establishment of a South Leicestershire Community Forest.

Policy 17 - Where possible we will encourage natural regeneration in our woodlands.

Policy 18 - Where possible, subject to public safety assessments, we will retain dead trees in woodlands preferring to prune rather than fell. In situ dead timber and felled trees are left to benefit habitat creation, or where appropriate with funds permitting, public art.



Photo 13 using dead wood as art at Brocks Hill County Park

Policy 19 - We will manage woodlands as a long term sustainable resource. This includes the woodland management technique of woodland thinning of young to enable the best trees to flourish.

Policy 20 - We will actively support and encourage community involvement in the planning and operation of woodland management.



Photo 14 getting involved with woodland management at Brocks Hill County Park

Policy 21 - We will produce and implement woodland management plans for all our woods which will take into account the wider landscape, historic and ecological issues.

Policy 22 – We will apply for the appropriate licenses for felling, from the Forestry Authority, within Oadby and Wigston Council Country Parks

Privately owned trees

Policy 23 – We will strive for provision of space for planting new trees on development and privately owned site by means of the planning application process. Foundation details should follow the recommendations of the National House Building Councils practice note 4.2 *Building*

near trees and distance from buildings complies with BS 5837:2012 'Trees in relation to design, demolition and construction. Recommendations'.

Policy 24 – We will expect to see tree reports in accordance with *BS 5837:2012 'Trees in relation to design, demolition and construction. Recommendations'* with submitted planning applications where nearby trees might be affected.

Policy 25 - We will expect to see works on construction sites that might affect trees, to be carried out in accordance with *BS 5837:2012 'Trees in relation to design, demolition and construction. Recommendations'* and that foundation details follow the recommendations of the National House Building Councils practice note 4.2 *Building near trees*.

Policy 26 – We will impose robust, tree specific planning conditions to ensure that trees are cared for during construction work. This will include arboricultural site supervision when it is appropriate and proportionate. We will enforce any breach of such safeguarding conditions.

Policy 27 – We will make Tree Preservation Orders when expedient in the interests of amenity.

Policy 28 – When considering applications to carry out works to trees protected by a Tree Preservation Order or in Conservation Areas we will expect to see all required information and process the application within 8 weeks. Applications to carry out work will not normally be permitted when the considerations highlighted in policies 7, 8 and 9 apply.

Policy 29 – When considering applications to carry out work where subsidence/heave is alleged, the level of detail set out in policy 14 is required.

Policy 30 – We will enforce and where appropriate will prosecute tree related contraventions.

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Photos from Brocks Hill Facebook page, or by the main author Sharon Hosegood, Chartered arboriculturist FICFor FArborA BSc (Hons) Tech Cert (Arbor A)

Glossary

Abscission	The shedding of a leaf or other short-lived part of a woody plant, involving the formation of a corky layer across its base.
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Access facilitation pruning	One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary for operations on site.
Adaptive growth	In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium. (This helps to maintain a uniform distribution of mechanical stress).
Adventitious	Describing shoots which develop neither from terminal nor axillary buds (see also Epicormic and dormant bud) or roots which form other than through primary development.
Anchorage	In trees, the holding of the root system within the soil, involving the flow of forces from the stem through the branches of the roots system to the cohesive root/soil interface.
Ancient hedgerow	Hedgerows which existed before the Enclosure Acts (1720-1840). These support a great variety of plants and animals, being species-rich with on average five or more native wood species in a 30m length.
Ancient woodland	In the UK, a site which has been woodland since at least 1600CE
Apical dominance	The hormone-induced regulation of the development of a tree or a branch, whereby the apical shoot(s) grows more than the laterals.
Arboriculture	Formerly all aspects of the culture of trees, especially for forestry. Latterly, the art and science of cultivating and managing trees as groups and individuals, primarily for amenity and other non-forestry purpose.
Arboriculturist	A person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.
Arboricultural method statement	Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.
Arboriculturist	Person who has, through relevant education, training and experience in the field of trees in relation to construction.
Architecture	In a tree, a term describing the pattern of branching of the crown or root system.
Backfill medium	Material used for refilling an excavated planting hole.

Bacteria	Microscopic single celled organisms, including many species that break down dead organic matter, together with others that can cause disease in other organisms.
Bark	A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm.
Biodiversity	The variability among all living organisms of an ecological complex.
Biomechanical	Pertaining to the mechanical functions and properties of living organisms, such as trees.
Body language	In trees, the outward display of growth responses and/or deformation in response to mechanical stresses.
Bolling	A term used to describe pollard heads or sometimes the entire permanent framework of a pollarded tree.
Branch	A limb extending from the main stem or parent branch of a tree.
Branch bark ridge	The raised arc of bark tissues that forms the acute angle between a branch and its parent stem
Branch collar	The swelling or roughened bark often found at the base of a branch which should be left intact if the branch is to be pruned off.
Brown-rot	A type of wood decay in which cellulose is degraded, while lignin is only modified.
Bucking	An irreversible deformation of a structure subjected to a bending load.
Burr	A term for various kinds of atypical woody protuberances, especially those derived from the mass proliferation of adventitious buds.
Buttress zone (root flare)	The basal part of a tree, where the major lateral roots join the stem with buttress-like formations on the upper sides of the junctions.
Canker	A lesion in which bark and cambium have been killed, sometimes exposing the wood and often showing a swollen appearance owing to the encircling growth of new tissues.
Cambium	Layers of meristematic cells in the cells peripheral to the phloem that give rise to bark.
Canopy	The topmost layer of twigs and foliage in a tree.
Chlorosis	A yellowing of the leaves and other green parts of a plant owing to low chlorophyll content, typically caused by nutrient deficiencies or other adverse conditions.

Chlorophyll	The pigment in green plants that permits photosynthesis.
Chlorophyll fluorescence	Light energy may be absorbed by the chlorophyll in a leaf or re-radiated in the infra-red (heat) or far red (fluorescence) parts of the spectrum. The fluorescence from a dark-adapted leaf subjected to a pulse of light can be measured by a fluorescence by a fluorimeter to infer photosynthetic capacity, an index of stress hence an early warning sign of deteriorating health.
Co-dominant	In trees, a similarity between two or more stems or branches with regard to their size and their position within the canopy.
Column	In the wood or phloem of a tree, an axially elongated zone of tissue that is distinguished from the surrounding tissue; e.g. Live versus dead or decayed versus non-decayed.
Construction exclusion zone	An area based on the root protection area from which access is prohibited for the duration of the project.
Containerised tree	Tree grow using containerizing nursery production system.
Compartmentalise	The confinement of disease or other dysfunction within an anatomically discrete region of plant tissue, due to passive and/or active defenses operating at the boundaries of the affected region.
Community Infrastructure Levy (CIL)	This is a new mechanism to deliver investment into local infrastructure. The levy will be a standard charge decided by local planning authorities and levied by them on new development.
Coppard	A hybrid word (from coppice and pollard), describing a tree consisting of several coppice stems, each of which has been pollarded.
Coppicing	The cutting of a woody plant near ground level to encourage the development of multiple stems.
Coupe	An area of woodland that has been (or is about to be) selectively clear-felled or coppiced.
Crown	In arboriculture, the main foliage-bearing portion of a tree.
Crown lifting	The removal or shortening of the branches that form the lower part of the crown of a tree.
Crown reduction	Pruning in order to reduce the size of the crown of a tree.
Crown thinning	Pruning inside the crown of a tree in order to reduce its density.
Defect	In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.

Dessication	The state of extreme dryness, the drying out of roots.
Dieback	The death of part of a plant, usually starting from a distal point and often progressing proximally in stages.
Direct damage	Direct physical damage to a structure of surface from pressure exerted by the trunk or growing roots.
Dormant bud	An axillar bud which does not develop into a shoot until after the second season following its formation. Many such buds persist through the life of a tree and develop only if stimulated to do so.
Ecosystem services	The benefits that a particular species or range of species bestow upon others (including humans) though ecological relationships. Such services can sometimes be estimated in a form that allows them to be included in financial accounting.
Epicormic	Pertaining to shoots or roots which are initiated on mature woody stems; shoots can form in this way from dormant buds or they can be adventitious.
Failure	In connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil.
Flush cut	A pruning cut close to the parent stem which removes part of the branch bark ridge.
Foreseeable	In hazard assessment, pertaining to failure and associated injury of damage which are predictable on the basis of evidence from a tree and its surroundings.
Fungi	Organisms of several evolutionary origins, most of which are multicellular and grow as branched filamentous cells within dead organic matter or living organisms.
Geographic Information System (GIS)	This is an information system for capturing, storing, analysing, managing and presenting data that is spatially referenced.
Green Infrastructure	This is a network of connected, high-quality multi-functional open spaces, corridors and the links in between that provide environmental services and multiple benefits for people and wildlife.
Girdle scar	A ring of minute scars encircling a shoot, which is left by the abscission of bud scales; useful for demarcating increments of shoot extension.
Hazard	A thing, a process or a potential event that has the potential to cause harm.
Heartwood	The dead or predominantly dead central wood of various tree species whose outer living wood, sapwood, has a finite and pre-determined lifespan.

Herbicide (weedkillers)	Chemical or biological materials that kill plants. They are usually applied in a spray to control weeds. Classified as residual or systemic. Herbicide may cause damage by drifting onto other plants.
Included bark	Bark of adjacent parts of a tree (usually forked stems, acutely joined branches or basal flutes) which is in face-to-face contact; i.e. without a woody connection. Such a structure lacks inherent strength but is in many instances strongly reinforced by a surrounding 'shell' of wood.
Independent in the landscape	Point at which a newly planted tree is no longer reliant on excessive or abnormal management intervention in order to grow and flourish with realistic prospects of achieving its full potential contribute to the landscape.
Level arm	A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch.
Landscape character	A distinct, recognisably and consistent pattern of elements in the landscape that make one landscape different from another, rather than better or worse.
Mulch	Material laid down over the rooting area of a tree or other plant to help conserve moisture, suppress weeds and encourage a beneficial microflora.
Mycorrhizal	Pertaining to an intimate symbiotic association between plant roots and specialized fungi.
Necrosis	The death of specific areas of living tissue owing to some adverse factor.
Occlusion	The process whereby a wound in a tree is progressively closed by the formation of new wood and bark around it.
Pathogen	A micro-organism that causes disease in another organism.
Phloem	Conductive tissue of trees and other plants, via which dissolved sugars are translocated from the foliage to tissues where they are needed for growth or for storage. In trees, phloem makes up the innermost layer of the living bark.
Photosynthesis	The process whereby plants use light energy to split hydrogen from water molecules, combining it with carbon dioxide to form the molecular building blocks for synthesizing carbohydrates and other biochemical products.
PICUS	The Picus Sonic Tomograph is a non-invasive tool for assessing decay in trees. It works on the principle that sound waves passing through decay move more slowly than sound waves traversing solid wood. By sending sound waves from a number of points around a tree stem to a number of receiving points, the relative speed of the sound can be calculated and a

	two-dimensional image of the cross-section of the tree can be generated
Pollard	A term for a pollarded tree
Pollarding	The complete or partial removal of the crown of a young tree so as to encourage the development of numerous branches; also, further cutting to maintaining this growth pattern.
Probability	A statistical measure of the chance that a particular event (e.g. a specific failure of a tree or specific kind of harm to persons or property) might occur.
Reaction zone	A defensive zone (usually dark in colour) within the wood of a living tree, which forms a boundary between fully functional sapwood and dysfunctional or decaying wood.
Resistograph	<p>This system is based on the measurement of drilling resistance.</p> <p>The IML-RESI operates in a similar manner to a normal drill. A drilling needle with a diameter of 1.5mm is inserted into the wood under constant drive. While drilling, the resistance is measured as a function of the drilling depth of the needle. The data is printed and stored electronically at a scale of 1:1 simultaneously.</p> <p>Although invasive the relatively small needle diameter causes very little damage, testing is normally only undertaken to confirm the remaining stem wall thickness in decaying trees.</p>
Retrenchment	Progressive reduction in the size of the crown of an old tree, by means of the dieback or breakage of twigs and small branches, accompanied by the enhanced development of the lower or inner parts of the crown.
Risks	The likelihood of the potential harm from a particular hazard becoming actual harm.
Root protection area	A layout tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. BS 5837:2012 ' <i>Trees in relation to design, demolition and construction – Recommendations</i> '.
Root flare	Thickened and expanded base of a tree stem at ground level form which buttress roots form.
Rootplate	The central part of the root system of a tree, consisting of the large-diameter main roots and a dense mass of smaller roots and soil.
Sapwood	The living xylem of a wood part, which either loses viability gradually over a number of years or decades or becomes converted in to a distinct, largely dead heartwood.

Service	In construction, any above-or below-ground structure of apparatus for utility provision.
Site of Special Scientific Interest (SSSI)	A designated area in the UK, at which specified activities are controlled by law for the purpose of conserving wildlife or other natural features.
SULE	Safe useful life expectancy of a tree (Barrell)
Supplementary planning documents	This is a piece of guidance supplement the policies and proposal in development plan documents.
Stag-headed	In a tree, a state of dieback in which dead branches protrude beyond the current living crown.
Stress	In plant physiology, a condition under which one or more physiological functions are not operation within their optimum range, for example owing to lack of water, inadequate nutrition or extremes of temperature.
Stub cut	A pruning cut which is made at some length distal to the branch bark ridge.
Target pruning	The pruning of a twig or branch so that tissues recognizably belonging to the parent stem or branch are retained and not damaged.
Targets	In tree hazard assessment, persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it.
Tree Preservation Order	In Great Britain, an order made by a local authority, whereby the authority's consent is generally required for the cutting down, topping or lopping of specified trees.
Tree protection plan	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposal, showing trees for retention and illustrating the tree and landscape protection measures.
TreeRadar Inc.	This equipment is ground penetrating radar that scans the ground for objects and records the data from live roots on a field computer.
Utility	An undertaker by statute that has a legal right to provide customer services (e.g. communication, electricity, gas and water).
Veteran tree	<i>'A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species'</i> . Ancient Tree Guide No. 4 (ATF, 2008).
Veteranization	Controlled infliction of damage on a tree to achieve a specific habitat objective.

Vigour	In tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth.
Vitality	In tree assessment, an overall appraisal of physiological and biomechanical processes, in which high vitality equates with near-optimal function, in which high vitality equates with healthy function.
Visual Tree Assessment (VTA)	In addition to the literal meaning, a system expounded by Matteck and Breloer (1995) to aid the diagnosis of potential defects through visual signs and the application of mechanical criteria.
White-rot	Various kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded.
Wound	Injury caused to a tree by a physical force.
Xylem	Plant tissue with the special function of translocated water and dissolved mineral nutrients.