RH Tree Consultants Ltd

Your trees, our concern

Site: Cygnet Elowen – Arboricultural Report

Client: Complete Weed Control Ltd.

March 2026

QTRA

Registered User Number 7711

Report to: **Simon Pannell, Group Sales Director, Complete Weed Control Ltd. Unit 16, Hurworth Road, Newton Aycliffe, County Durham, DL5 6UD**

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Executive Summary

By instruction from Simon Pannell of Complete Weed Control Ltd (the Client) on behalf of their client Cygnet Health Care, RH Tree Consultants Limited (RH Trees) has carried out a tree survey at Cygnet Elowen Hospital, The Field, Shipley, Heanor, DE75 7JH. This survey has formed the basis for an assessment of the current condition of the tree stock on site and to identify any future management requirements or tree planting opportunities. This inspection was a baseline survey. A member of the maintenance staff escorted Max Battison – Arboricultural Consultant, around the site to identify site boundaries and extent of tree ownership.

The survey recorded all significant trees within the site and those which may affect targets within the site boundary requiring further mitigation. recording several parameters including species, crown spread and height. The Quantitative Tree Risk Assessment (QTRA) system was applied to this inspection.

The survey recorded 33 individual trees and 7 tree groups. The site was a rehabilitation centre in a residential area.

Information available on the Derbyshire County Council states there are no trees on site subject to a TPO.

An online search using the Multi Agency Geographical Information for the Countryside (MAGIC) website for statutory conservation sites was undertaken (where appropriate) to determine the presence of Ancient Woodland within 15.0 m of the site boundary.

This report has been instructed to fulfil the Clients duty of care under the Occupiers Liability Act 1957 and the Highways Act 1980.

This report details the potential arboricultural management requirements and highlights current items requiring mitigation for tree risk management.

The report also makes recommendations for any measures to mitigate or compensate for the loss of any trees within the site and the likely impact on the site and the wider local landscape.

1. Introduction

1.1 Location

1.1.1 RH Trees has been commissioned by the Client to undertake a tree survey of the site at Elowen Hospital, The Field, Shipley, Heanor, DE75 7JH and prepare the findings in a report. The site location is shown in Figure 2.

Figure 1: Location Map



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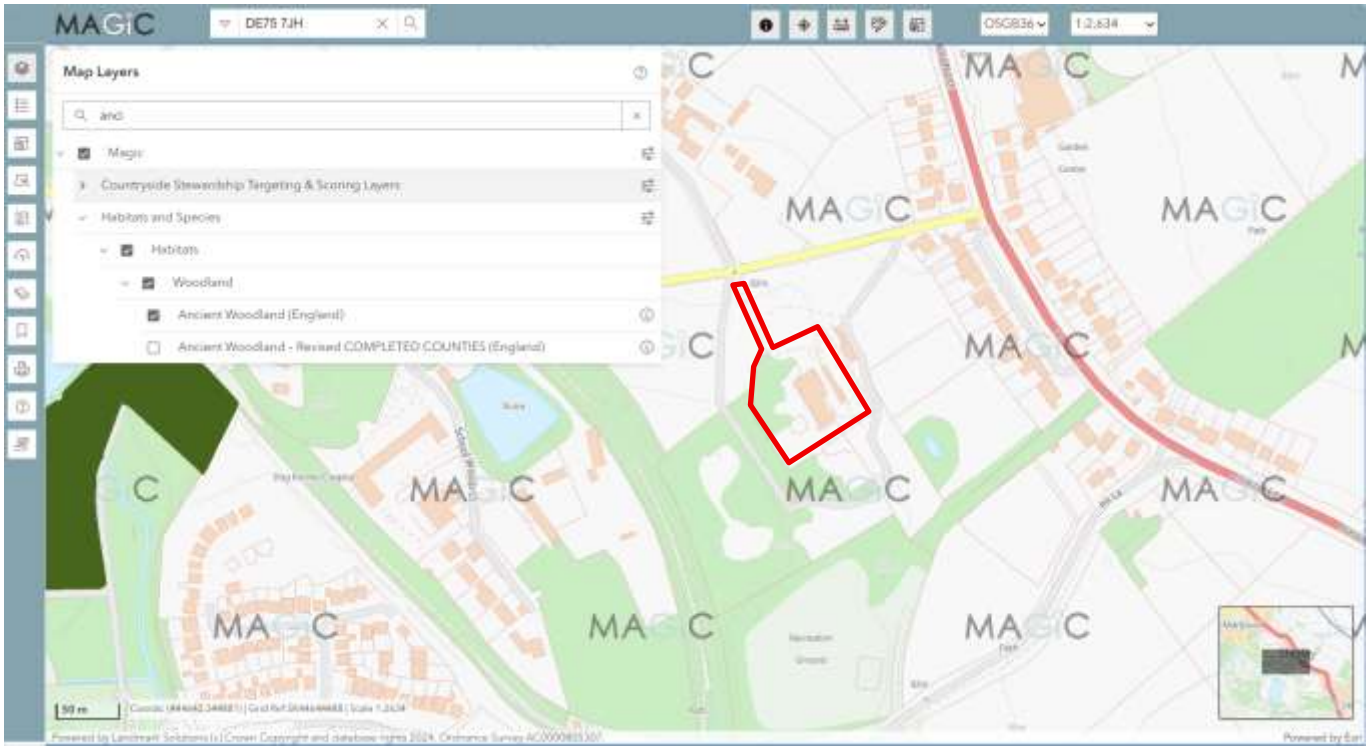
1.2 Tree Designations

1.2.1 The information available on Calderdale Council website confirms that multiple trees on site are subject to a TPO.



1.2.2 The permission of the local planning authority must be sought before any works are carried out to protected trees. Potentially unlimited fines can be imposed for illegally carrying out any works to protected trees.

1.2.3 Reference to the Multi Agency Geographical Information for the Countryside (MAGIC) website indicates that no ancient woodland is present within a 15.0 m buffer of the site.



1.3 Protected Species

Bats

1.3.1 Mature trees can often contain cavities or hollows which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) are protected under *The Conservation of Habitats and Species Regulations* 2017 (Habitats Regulations 2017). They also receive legal protection under the *Wildlife and Countryside Act* (WCA) 1981. Consequently, causing damage to a bat roost constitutes an offence.

1.3.2 Generally, should the presence of a bat roost be suspected whilst completing works on any trees on site then an appropriately licensed bat ecologist should be consulted for advice.

Birds

1.3.3 Trees and hedgerows can provide habitat for nesting birds which are protected under the *Wildlife and Countryside Act* (WCA) 1981. Some species are further protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

1.3.4 As the trees at the site provide potential habitat for nesting birds all tree work should ideally be completed outside the peak nesting bird season (Generally March to August inclusive).

1.3.5 If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have fully fledged.

2. Tree Survey Methodology

2.1 Site survey

2.1.1 RH Trees have undertaken the tree survey in accordance with industry best practice and the QTRA system training to provide detailed and independent arboricultural advice in the context of the tree stock on site. The survey was a ground based visual inspection carried out by a suitably qualified arboriculturist. All individual trees were tagged as part of the survey. Trees were geo located using an Emlid Reach RX GPS receiver (sub 10cm accuracy). I carried an IML 1m probe, 8x50 binoculars, a Nikon Forest Pro ii laser clinometer, a diameter tape and water-soluble marker paint.

2.1.2 The scope of this report is as follows: -

- An assessment of zones high, medium and low risk based on targets and target occupation within falling distance of trees.
- A schedule of the relevant trees to include basic data, tree location and a condition assessment.
- A tree risk assessment based on current targets, defects and the likelihood of failure or damage to structures.
- A schedule of any subsequent work that may be required.
- A schedule of any subsequent inspections based on locations and targets.

2.1.3 The tree inspection was carried out in March 2026 by Max Battison, Arboricultural Consultant, when the deciduous trees were out of leaf.

2.1.4 The weather on the day of the survey was sunny, and a light breeze allowing for suitable inspection conditions.

2.1.5 RH Tree Consultants Ltd have visually inspected all trees on site and have reported on 33 individual trees and x7 tree groups located within the boundaries of the site.

This inspection considers the following:

- A distance visual assessment of the tree, considering the overall shape, form, foliage colour appropriate for the time of year and any other elements that do not appear normal for that species.
- Exposure to weather. This can be due to it being a solitary tree or that its surrounding tree cover could have been removed exposing it to ‘new wind forces’ acting on the canopy.
- Prevailing ground conditions. For example: soil erosion, ponding, soil characteristics and their subsequent impact on the tree, presence / lack of vegetation.
- Any information as to the tree’s history or history of the surrounding trees / landscape. For example: previously failed limbs, surrounding tree removal / failure, excavations, fungal fruiting bodies seen.
- Knowledge of previous documented information of issues with a particular species. For example: tight union failure on Beech, poor compartmentalisation of Willow.
- The health and visual defects of the tree. For example: cavities, the trees ‘body language’, dieback, foliage irregularities, fungal brackets and deadwood.

From this information, an assessment is made of the likelihood of the part/s most likely to fail in relation to the target/occupancy value within the trees failure area and recommendations are then made, these can include the following but are not exhaustive: -

Recommendations for further visual monitoring.
Remedial pruning / limb removal.
Whole tree removal.
Removal of significant deadwood.
Root investigation, de-compaction or soil improvement.
Or no work may be needed.

2.1.2 The following characteristics were recorded:

- Species
- Description & Targets
- Number of Stems
- Estimated height (m)
- Stem diameter at 1.5 m above ground level (mm)
- Approximate crown spread (m) in North, East, South and West directions
- Age class
- Failure Indicators
- Target Range (QTRA)
- Size Range (QTRA)
- Potential of Failure (QTRA)
- Risk of Harm (QTRA)
- Tree Condition
    - Physiological Condition
    - Structural Condition
    - Overall Condition
- General notes about the trees
- Public Amenity Value
- Wildlife Value
- Overall Residual Risk
- Inspection Limitations
- Recommendations
    - Timescale for mitigation

2.1.6 All survey data was geolocated on site to an accuracy of <2m where possible.

2.1.7 Some measurements for trees with limited accessibility may have been estimated. This is highlighted with a hash (#) symbol in the Tree Survey Schedule at Appendix 1.

2.1.8 Where trees formed a contiguous canopy, they may have been grouped, in line with industry best practice.

2.1.9 Trees are living organisms that change over time. A re-survey of all trees should be carried out if there have been any significant storm events or more than 18 months have passed since the survey was carried out.

2.1.10 Where management or works are recommended, they will be based on maximizing the tree's safe useful life expectancy (SULE) or the reduction of risk posed to potential targets. A lack of recommendation does not imply that the tree is safe, nor should it be implied that a tree will be made safe following recommended works.

3. Tree Survey Results

3.1 General Site Description

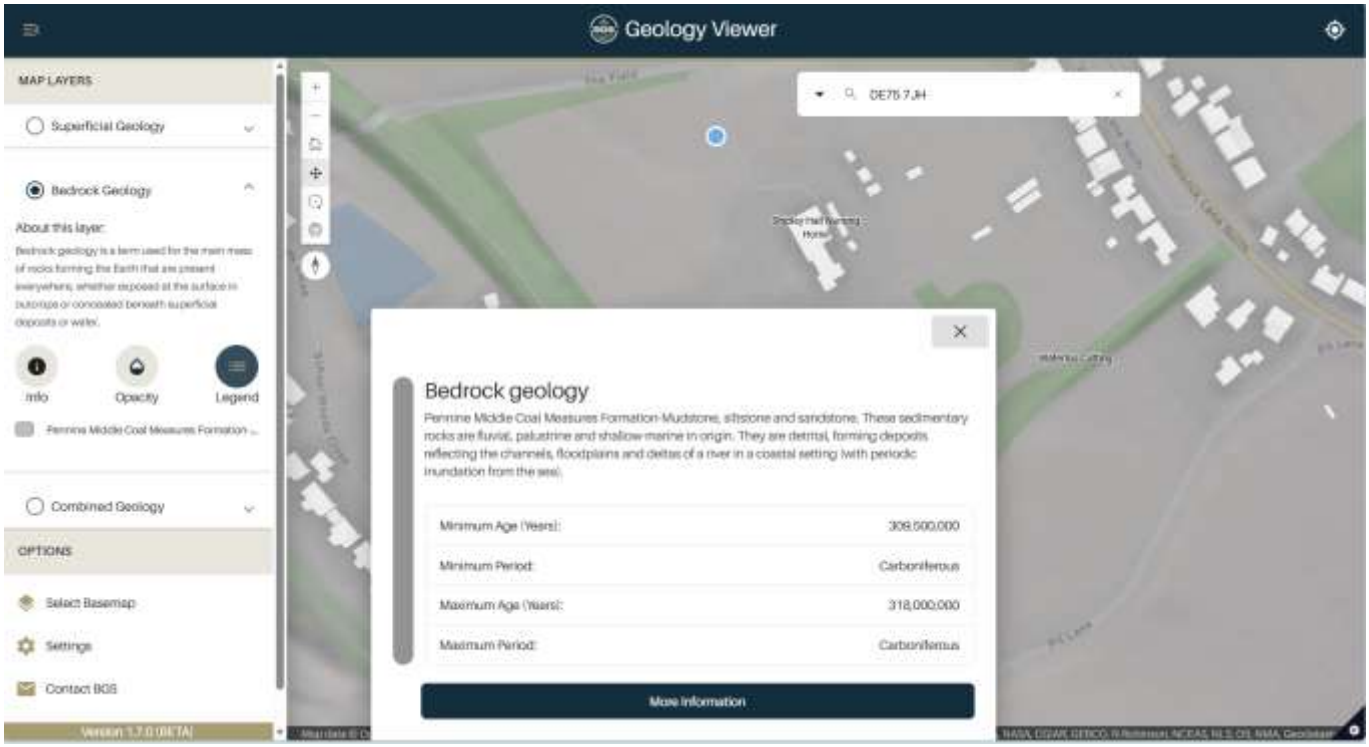
3.1.1 The site is a purpose built rehabilitation hospital in a rural area a third party property is adjacent to the site to the north east. The site is located on the outskirts of Heanor with Shipley Country Park located 1km to the west of the site. Targets are generally the site itself rather than any external roads or properties. Trees surround the site with more woodland style areas to the southeast and west of the site.

3.1.2 Most trees on site were mature stems. The most significant group of trees is G004 located to the south. Although in a lower target area the trees are mature lime and birch that act as a screen to neighbouring fields.

3.1.3 Significant targets near tree stock include the general site itself, the main building and car parking facilities, and outdoor seating areas. There are no footpaths a or roads within influencing distance of the tree stock. One third party property is located adjacent to the northern boundary within influencing distance of trees located to the northern boundary.

3.1.4 Following a desktop study, British Geological Survey Data suggests the soils on site are comprised of of Pennine Middle Coal Measures Formation-Mudstone siltstone and. This soil type exhibits a moderate shrink/swell potential and as such BRE and NHBC guidance should be followed in the event of new planting and development.

3.1.5 On site soil information should be verified with site soil trial investigations if appropriate.



Underlying soil material contains clay?	NO
Soil type increased rooting depth profile?	YES
Increased risk of soil compaction due to soil type?	YES

3.2 Results of Tree Survey

3.2.1 The Tree Survey Schedule at Appendix 1 details the results of the tree survey and includes any management recommendations. The schedule should be read in conjunction with the tree plans at Appendix 3 which show the location of each tree and group recorded and the extent of their canopies.

3.2.2 33 individual trees, 7 tree groups, 0 woodlands and 0 hedgerows have been recorded during the survey.

3.2.3 In general, the stock on site was seen to be in an acceptable condition.

3.2.4 In general, biodiversity on site was noted to be good in terms of species and age range.

3.2.5 The majority of trees on site were considered to be mature, there were young and early mature trees within the site.

3.2.6 The significant vegetation within the site consisted of mostly native planted trees and a scattering of shrubs to the woodland area of the southwest.

3.2.7 No significant biosecurity issues were noted on site.

3.2.8 **QTRA Roh Map**



4. Recommendations

4.1 Present Requirements

4.1.1 Any works required to establish acceptable levels of risk for the site and to maintain the trees in line with good arboricultural management are listed in a priority scale and should be carried out within the time scale indicated. These lists of works are designed to highlight dangerous situations and are necessary for safety reasons or to establish high levels of arboricultural management to the existing trees. This is based on the reasoning of proactive intervention rather than reactive to failure.

Tree Survey Recommendations

Client: Complete Weed Control Ltd.
Site: Cygnet Elowen

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Timescale	No. Recommendations
6 Months	1
1 Year	10
Total	11

Ref.	Species	Description	Measurements	Recommendation	Work Timescale	Photo
T002	Corsican pine *(Pinus nigra laricio)*	Owned by the estate. Parkland tree. Suspected new compaction within RPA due to pavjngwithin 5m of stem. Target # - building Target # - car park.	Height (m): 13 Crown Radius (m): 5 DBH (cm): 57 Life Stage: Early Mature Life Exp.: <10 years	Remkvemajot deadwood above carpark.	18-Sep-2026 (6 Months)	
T004	Ash *(Fraxinus sp.)*	Owned by the estate. Parkland tree. Target # - car park. Target # - overhead wires.	Height (m): 12 Crown Radius (m): 4 DBH (cm): 30 Life Stage: Semi Mature Life Exp.: 20+ Years	Remove branch interferring with utility wires.	18-Mar-2027 (1 Year)	
T009	Sweet chestnut *(Castanea sativa)*	Owned by the estate. Parkland tree. Tree in fence line. Target # - building Target # - car park.	Height (m): 10 Crown Radius (m): 4 DBH (cm): 60 Life Stage: Mature Life Exp.: 10+ Years	Maintain as habitat feature. Deadwood in low target area.	18-Mar-2027 (1 Year)	
T012	Norway maple *(Acer platanoides)*	Owned by the estate. Parkland tree. Target # - car park.	Height (m): 8 Crown Radius (m): 3 DBH (cm): 15 Life Stage: Semi Mature Life Exp.: <10 years	Maintain as habitat. Not yet significant risk.	18-Mar-2027 (1 Year)	
T015	Birch *(Betula sp.)*	Owned by the estate. Target # - building Target # - car park. Target # - dwelling.	Height (m): 16 Crown Radius (m): 3 DBH (cm): 27 Life Stage: Mature Life Exp.: 20+ Years	Remove hanging branch.	18-Mar-2027 (1 Year)	
T020	Ash *(Fraxinus sp.)*	Owned by the estate. Parkland tree. Tree in fence line. Target # - building Target # - playground.	Height (m): 15 Crown Radius (m): 5 DBH (cm): 40 Life Stage: Early Mature Life Exp.: 20+ Years	Sever ivy at base and remove.	18-Mar-2027 (1 Year)	
T023	Sycamore *(Acer pseudoplatanus)*	Owned by the estate. Woodland tree. Partially collapsed over fence.	Height (m): 15 Crown Radius (m): 3 DBH (cm): 40 Life Stage: Dead	Maintain as habitat feature.	18-Mar-2027 (1 Year)	
T028	Lime *(Tilia sp.)*	Owned by the estate. Woodland tree. Pollarded at 15m c.7 years ago. Target # - building Target # - car park. Target # - dwelling. Target # - footpath.	Height (m): 19 Crown Radius (m): 6 DBH (cm): 70 Life Stage: Mature Life Exp.: 20+ Years	Epicormic removal.	18-Mar-2027 (1 Year)	
T030	Lime *(Tilia sp.)*	Owned by the estate. Target # - car park.	Height (m): 13 Crown Radius (m): 4 DBH (cm): 45 Life Stage: Early Mature Life Exp.: <10 years	Remove hazardous deadwood.	18-Mar-2027 (1 Year)	

Ref.	Species	Description	Measurements	Recommendation	Work Timescale	Photo
T030	Lime *(Tilia sp.)*	Owned by the estate. Target # - car park.	Height (m): 13 Crown Radius (m): 4 DBH (cm): 45 Life Stage: Early Mature Life Exp.: <10 years	Pollard at 8m below poor crown union.	18-Mar-2027 (1 Year)	
T031	Lime *(Tilia sp.)*	Owned by the estate. Woodland tree. Target # - car park.	Height (m): 20 Crown Radius (m): 7 DBH (cm): 50 Life Stage: Mature Life Exp.: 40+ Years	Epicormic removal.	18-Mar-2027 (1 Year)	No Photo

4.2 Tree Pruning

4.2.1 The pruning of trees should only be undertaken when essential, to prevent open wounds that can lead to bacterial or fungal infection. Pruning works should generally be undertaken during the winter months when the tree is dormant or during the summer months when the tree is fully active.

4.2.2 Any pruning works that are required to facilitate risk mitigation are detailed in the Tree Survey Schedule at Appendix 1.

4.2.3 Tree pruning should be carried out by a suitably qualified and insured arboricultural contractor.

4.2.4 Where the removal of trees is required the planting of suitable replacement trees should be undertaken as part of a wider landscaping scheme. It is recommended that tree planting follows a 5 – 10 – 20 - 30 formula (i.e. No more than 5% of any one cultivar, no more than 10% of any one species, no more than 20% of any one genus, and no more than 30% of any one family.) This gives any new tree population maximum resilience against pests and diseases.

4.2.5 Tree planting and establishment should be carried out in accordance with BS 8545:2014 *Trees: from nursery to independence in the landscape – Recommendations*.

5. Other Considerations

5.1 Re-Survey Frequency and Zoning

Given the population of trees on site and the proximity of high occupancy targets areas (such as footpaths and highways), it is of my opinion that as a minimum, the trees on this site be surveyed by a qualified arboricultural consultant at a frequency on no greater than every 18 Months in a leaf on, leaf off rotation so as to fully assess the tree through its annual stages.

5.2 Safety

Tree works can be a hazardous profession, so it is important that all operatives have the necessary and relevant training, health and safety policy and valid forms of insurance.

6. Glossary of Terms

Adaptive Growth - In tree biomechanics, the process whereby wood formation is influenced both in quantity and quality by the action of gravitational forces and mechanical stresses on the cambial zone.
Aerobic Conditions - In which oxygen is freely available, or to biomechanical processes that depend on the presence of oxygen.
Anaerobic - A condition marked by the absence of oxygen; Generally, such areas are unsuitable for normal life and growth of plant tissues. These sites tend to be populated by bacteria capable of surviving low oxygen conditions often associated with Slime Flux.
Arboriculture - The culture and management of trees as groups and individuals primarily for amenity and other non-forestry purposes.
Arborist - A person possessing the technical competence through experience and related training to provide management of trees or other woody plants in a landscape setting. Generally involved with the development or management of trees for visual amenity or land management rather than the growth of trees for product or profit.
Barrier Zone - A layer within an annual increment of wood which contains abnormal xylem cells, laid down by the cambium in response to wounding or another trauma.
Body Language in Trees - The outward display of growth responses and or deformation in response to mechanical stress.
Bole or Trunk - The main stem of a tree below its first major branch.
Bracket - A type of fruiting body produced by various fungal species, plate like to hoof like in shape and often a one-sided attachment to the wood or bark.
Branch Bark Ridge - A ridged area located at the union of a branch to a trunk or stem.
Branch Collar - Trunk tissue that forms around the base of a branch between the main stem and the branch, or between a main branch and a lateral branch. As a branch decreases in vigor or begins to die, the collar usually becomes more pronounced and completely encircles the branch.
Brown Rot - Form of decay where cellulose is degraded, while lignin is only modified.
Buttress Root - Roots that emerge from the base of the tree stem, normally large and well developed that rapidly reduce in diameter to create the Root Plate this offers structural support for the tree. Buttress roots divide rapidly forming the connection between the stem and the transport roots.
Cabling Bracing - Installing cables within the crown of a tree to prevent collapse.
Callus - Undifferentiated cells often formed at the edges of recent injuries. This tissue quickly becomes differentiated, forming cells of the type characteristic of that position on the tree (e.g. forming wood, bark, roots, etc.) see wound response tissue.
Cambium - A thin layer of actively growing and dividing cells, located between the xylem (sapwood) and bark of a plant; the part responsible for radial growth of a tree stem or branch.
Canopy - The topmost layer of twigs and foliage in a woodland, tree or group of trees.
Canker - A localized area of dead bark and cambium on a stem or branch, caused by fungal or bacterial organisms, characterized by wound wood development on the periphery. This may be annual or perennial.
Cavity - An open and exposed area of wood, where the bark is missing and internal wood has been decayed and dissolved.
Chlorotic also Chlorosis - A condition of the plant marked by yellowing of normally green foliage, often indicating nutrient deficiency or plant dysfunction.
Clinometer - Device that measures vertical angles and provides direct height measurements of objects by triangulation.
Co-dominant Stems/Trunk - Are forked branches or trunks of nearly the same size in diameter and lacking a normal branch union.

Compacted Soils - Soils in which the airspace (oxygen space) has been reduced or eliminated, reducing water infiltration and percolation, reducing root presence and inhibiting new root development.
Compartmentalization - The physiological process that creates the chemical and mechanical boundaries that act to limit the spread of disease and decay organisms.
Compression Failure - Localized buckling of fibres and other longitudinal elements produced by compression of wood along the grain; compression failures sometimes develop in standing trees.
Compression Strength - The ability of a material or structure to resist failure when subjected to compressive loading; measurable in trees using special drilling devices
Compression Wood - Abnormal wood formed on the lower side of branches and curved stems, with physical properties different from normal wood.
Conservation Area - In Great Britain, designated areas of architectural or historical interest, in which there are special procedures for planning applications. Additionally, tree works cannot generally be undertaken without prior notification (Currently 6 weeks) to the relevant local planning authority. See also Tree Preservation Orders.
Core Sample - A sample of wood extracted from a trunk or branch, using an increment borer tool. The resulting core can be analysed for characteristics of growth, wood strength, structure, decay, and for species identification.
Crotch - The union of two or more branches; the auxiliary zone between branches.
Crown - The upper canopy of a tree, including upper trunk, scaffold branches, secondary branches, stems and leaves.
Crown Lifting / Raising, Crown Lift - The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.
Crown Reduction - The reduction of a tree's height or spread while preserving its natural shape.
Crown Thinning - The removal of some of the density of a tree's crown, usually 5-25% allowing more light through its canopy and reducing wind resistance.
Deadwood (noun) - Deadwood is often present within the crown or on the stems of trees. It may be an indication of ill health; however, it may also indicate natural growth processes. If a target is present beneath the tree, deadwood may fall and cause injury or damage and should be removed, otherwise deadwood can remain intact for conservation purposes (insects, fungi, birds etc.).
Deadwood (verb) - The removal of dead branches from a tree's canopy, usually of a specified size (in diameter).
Decay - Progressive deterioration of organic tissues, usually caused by fungal or bacterial organisms, resulting in loss of cell structure, strength, and function. In wood, the loss of structural strength.
Decay Detection - The assessment of decay within a tree has been traditionally difficult, but recent advances have made it possible to achieve accurate representations of the internal section of a tree in both 2D and 3D, removing doubt over the condition of the tree and allowing accurate management decisions.
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.
Defoliation - The loss of plant foliage.
Dieback - Progressive death of buds, twigs and branch tissues, on individual limbs resulting in Deadwood, or throughout the canopy, extreme cases can result in Stag Heading.
Dripline - A projected line on the ground that corresponds to the spread of branches in the canopy; the farthest spread of branches.
Epicormic Shoots - Fast growing, weakly attached shoots/branches that often grow as a response to stress factors upon a tree or branch removal.

Failure - In connection with tree hazards, a partial or total fracture within the wood tissue or loss of cohesion between roots and soil. (In total failure affected parts will snap or tear away completely, Partial failure there is a crack or deformation, which results in an altered distribution of mechanical stress.
Feeder Roots - Fine Fibrous water and nutrient absorbing roots located in the outer root system.
Flush-Cut - In trees and shrubs, a pruning cut close to the parent stem, which removes the branch bark ridge.
Foliage - The live leaves or needles of the tree; the plant part primarily responsible for photosynthesis.
Formative Pruning - The trimming of a tree to remove weaknesses and irregularities which may lead to problems. The formative pruning operation is aimed at reducing the potential for future weaknesses or problems within the tree's crown.
Gall - An abnormal, disorganized growth of plant tissues, caused by parasitic or infectious organisms such as insects, fungi, bacteria, or viruses.
Girdling - In woody plants, any form of damage that destroys the bark and / or the Cambium all the way around the stem, branch or root, normally resulting in death of the damaged section.
Girdling Root - In woody plants, a root that grows across the buttress, or across other roots, eventually causing constriction of the radial growth.
Growth Increment - The incremental growth added as new annual ring develops each season over existing wood. This is seen as (growth) rings in cross-sections of wood.
Hazard Beam - An upwardly curved branch in which strong internal stresses may occur without the compensatory formation of extra wood (longitudinal splitting may occur in some cases).
Heartwood - Inner nonfunctioning tissues that provide structural support to trunk.
Heave - In relation to shrinkable clay soils, expansion due to rewetting of a volume of soil previously subjected to the removal or water by plant / trees following felling or root severance. Also in relation to root growth, the lifting of pavements and other structures by radial expansion. Also in relation to tree stability, the lifting of one side of a wind rocked root plate.
Herbicide - A chemical compound that causes the death of a plant.
Included Bark - Bark that becomes embedded in a crotch between branch and trunk or between co-dominant stems, usually found in narrow or tight crotches, and causes a weak structure.
Increment Borer - A tool that cuts and extracts a narrow cylinder of wood from a tree for analysis of the wood tissue and growth increments.
Leader -The primary terminal shoot or trunk of a tree.
Limb - A large lateral branch growing from the main trunk or from another larger branch.
Lion Tailing - Often the result of poor pruning practices; the main leader or branches are largely devoid of side branches; growth is restricted to the end of branches and is likely to suffer damage through end loading.
Monitoring - Due to the relative life span of trees in relation to our own, long-term monitoring provides a valuable insight to the health of trees, identifying decline and or stabilisation and or improvement.
Mulch - A material laid over the root system of a tree to help conserve moisture within the soil. Additionally, it may help control the development of weeds close to the tree.
Mycelium - A mass of growing filaments (hyphae) formed by fungi.
Mycorrhizae - The symbiotic relationship between roots and certain beneficial fungi. Mycorrhizae are the combined root / fungal growth.
Occluding Tissue - The general tern of wood, cambium and bark that develop around the site of a wound on a woody plant
Pathogen - A microorganism that causes diseases within another organism.
Phloem - The principle conductive tissue that the products of Photosynthesis are transported around the plant

Photosynthesis - The process where light energy is used to create energy (Carbohydrate) for use within the plant.
Pollard - A term for a pollarded tree.
Pollard Head - The swollen section of branch / stem that forms behind the pollarding cut.
Pollarding - The complete or partial removal of the crown of a young tree so as to encourage the development of numerous branches either for amenity or historically as fodder, repeated management is required cyclically to maintain the feature.
Prune or Pruning - Selective removal of woody plant parts of any size, using saws, Loppers, Secateurs, or other pruning tools.
Reaction Wood - Wood with distinctive anatomical characteristics, formed in parts of leaning or crooked stems and in branches to provide additional strength / support. In hardwoods, tension wood usually forms. In conifers, compression wood is usually found.
Reaction Zone - A zone normally darker than surrounding wood that denoted the boundary often a defensive one between functional sapwood and dysfunctional or decaying wood.
Re-grading - The raising or lowering of a soil profile from its original grade.
Remedial Pruning - The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown.
Resistograph - Invasive decay detection technique whereby the resistance offered by the timber to a spinning probe is measured and plotted.
Rib - In tree body language, a long narrow, axial protuberance which often over lays a crack.
Ring Barking - Artificial Girdling of the stem, to result in the death of a tree. May be used in habitat creation were the retention of dead standing trees is required.
Rod Bracing / Bolting - Traditionally, this has relied upon the Installation of steel rods or bolts through the stems or limbs, to reduce twisting or splitting of the wood. The installation of such features does require legal interpretation.
Root Barriers - Both Buildings and services can benefit from the installation of root barriers to protect a soil volume from the ingress of roots.
Root Collar - The basal area of the tree; transition zone from trunk to root. Also, sometimes called trunk flare.
Root Plate - The primary support area for the tree; an area of the root system close to the base that structurally anchors the tree to the soil.
Root Rot - Either a general term for decay within the wood of the lower stem / buttress roots, or a disease in which the fine roots are killed.
Root System - The portion of the tree containing the root organs, including buttress roots, transport roots, and fine absorbing roots; all underground parts of the tree.
Root Zone - The area and volume of soil around the tree in which roots are expected. May extend to three or more times the branch spread of the tree, or several times the height of the tree.
Sail Area - That area or the tree subjected to wind load.
Sapwood - Xylem wood tissue, usually light in colour, representing the outer growth rings of the wood. Usually living, reactive wood tissue, in a healthy tree. See heartwood.
Scaffold Limbs / Scaffold Branches - The branches that from the main network framework of the crown of a tree.
Senescent - A decline in growth and vigour due to age or stress factors.
Shrub - A woody plat that branches at or close to the ground level and so does not have a single stem.
Slime Flux - Relating to a toxic condition from the spreading of bacteria or their products from a source of infection; characterized by malodorous gases, or salt deposits upon the bark. If these products enter the sap stream, localised vessel necrosis can result, usually associated with anaerobic conditions.
Soft Rot - A kind of wood decay, where fungi degrade cellulose within the cell wall, without causing overall degradation.

Soil Compaction - The compression of soil, causing a reduction of pore space and an increase in the density of the soil. Air is squeezed out and nutrients become locked. Tree roots cannot grow in compacted soil.
Sonic Decay Detection - Non-invasive method whereby sound waves are passed through the tree and the speed is measured. Slow speeds indicate decay and a tomography picture representing the inner stem is produced.
Stag Heading - In a tree, a state of dieback were dead branches protrude beyond the current living crown.
Stress - In plant physiology, conditions were one or more physiological functions Are not working within normal parameters.
Stump Grinding - The removal of a tree stump using a specialist grinding machine.
Subsidence - In relation to vegetation, the removal of water by plant growth resulting in localised shrinkage in the soil volume.
Sucker - Same as sprout.
Suppressed - Trees which are dominated by surrounding vegetation and whose crown development is restricted from above.
Systemic - Affecting the whole plant or organism. A systemic compound is carried throughout the entire plant to all parts through the vascular system.
Target - Any person or object within reach of a falling tree or part of a tree that may be injured or damaged.
Target Pruning - The pruning of a branch where the wound affects only branch material, often result in a target shaped wound.
Tension Wood - Reaction wood typically formed on the upper side of limbs or curved stems; characterized by lack of cell wall lignification (higher ratios of cellulose to lignin).
Tight Union / Tight Crotch Also, Narrow Crotch - A crotch with a narrow angle between branches, often having included bark.
Tomography (PiCUS) - The comparison of sound or stress waves through the tree allows the creation of a 2D or 3D representation of the internal structure of a stem or branch section and highlights areas of damage. Virtually non-injurious.
Topography - The configuration of surface features, including the vertical and horizontal relationships of the ground and other features.
Topping - Cutting large limbs back severely, without regard to form or habit of the tree. Cuts are usually made between lateral branch nodes. This practice is extremely injurious to trees, and promotes decay and structural weakness within the crown.
Tree - A woody plant that typically has a single stem, at maturity has a height of a least 4 meters and a stem diameter at breast height of at least 75mm.
Tree Preservation Order - In Great Britain, an order made by the local planning authority, were consent must be gained before undertaking all but exempt works to a tree.
Trunk Flare - The basal area of the trunk that flares or widens and merges with the main roots. See root collar Veteran Tree Veteran trees are often found in large parks or estates and commonly affected by extensive decay or have been subject to extensive works. These trees are retained for historical importance and often pose greater risk than normal, which is generally justified. They need careful management and often propping or bracing to support them, some require fencing to limit access.
Vigor - Active, healthy growth of plants: ability to respond to stress factors.
Visual Tree Assessment (VTA) - An assessment of the mechanical condition of trees based upon their ‘body language’. Trees are dynamic and respond to faults / decay / environmental factors in various ways, these responses can be indicative of structural integrity.
Wetwood - An infection caused by bacteria living inside the plant tissues. The bacteria ferment the plant fluids, resulting in death of nearby cells, and often causing exudations of fluid from the bark, often referred to as a Slime Flux.
White Rot - A kind if wood decay where fungi attack the lignin within the wood matrix.

Wind Loading - Forces placed upon tree canopy, branches, trunk and roots of a tree under windy conditions.
Wind Throw - The failure of a tree due to wind loading.
Witches Broom - A deformed or unusual growth of twigs from adventitious buds, caused by insects, disease, or dieback of twigs and buds.
Wood Secondary Xylem - The main structural support and water conducting tissue of trees and shrubs.
Wound Response Tissue Also Occluding Tissue - Wound Wood or Callus. Differentiated wood tissue that grows around the margins of a wound or injury.
Wound Wood - Wood with atypical features, formed in the vicinity of a wound and a term to describe the occluding tissues around a wound
Xylem - Plant tissues with special function of translocation of water and dissolved nutrients.

Appendix 1: Qualification and Experience of the Surveyor

Brief details of qualifications and experience of Rory Hobbs and Max Battison

- **LANTRA Professional Tree Inspection Award**
- **BS:5837 Tree Surveying and Categorisation**
- **Quantitative Tree Risk Assessment (QTRA) user 7711**

Date	Board	Qualification
09.11.07	City & Guilds	CS30.1
09.11.07	City & Guilds	CS30.2
09.11.07	City & Guilds	CS31
08.06.08	City & Guilds	CS39
24.09.09	City & Guilds	CS40
24.09.09	City & Guilds	CS41
20.03.15	IPAF	MEWP 1b (Renewal)
10.06.17	LANTRA	BS:8586 2015 Surveying Bats in Trees and Woodland (Renewal)
21.02.18	SWQR	S1 Monitoring Signing, Lighting and Guarding
10.04.18	CSCS	Skilled Worker
22.10.18	ABC	Emergency First Aid at Work + F
08.08.18	NCC	Ash Dieback Seminar
12.02.19	LANTRA	Professional Tree Inspection
04.06.19	AA	BS5837:Tree Surveying and Categorisation
01.10.19	Sorbus International	PiCUS Sonic Tomography Refresher Course
23.10.19	AA	East Anglian Autumn Seminar
24.11.20	AA	Getting to Grips with Subsidence
14.12.20	AA	Subsidence Investigation
27.11.24	QTRA	QTRA Registered User (no. 7711)
09.07.25	Treelife Arboricultrual Training Ltd	Mortgage Report Writing Online

Rory Hobbs has worked in arboriculture for over 20 years. I became operations manager for a large AA Approved contractor focusing on the commercial sector before becoming the arboricultural lead for Kier Highways working on the Highways England Area 6 & 8 Contract. In this role, I was responsible for the management of over 7 million roadside trees. I launched RH Tree Consultants in 2018 and in that time have delivered all elements of arboriculture consultancy services to clients including Highways England, Anglia Water, Thames Water, Royal Historic Palaces, Forestry England, The Ministry of Defence, Large Construction companies and a plethora of other, largely commercial clients.

Appendix 2: Site Photographs



Plate 1: T030 in context showing dead top.



Plate 2: T033, with significant epicormic growth consistent with other mature lime trees on site.



Plate 3: T009 in context showing significant deadwood.

Appendix 3: Tree Survey Schedule

See attached

Appendix 4: Tree Location Plan

See attached

Appendix 5: Quantitative Tree Risk Management – A brief summery

Tree safety management is a matter of limiting the risk harm from tree failure while maintaining the benefits conferred by trees. Although it may seem counter intuitive, the condition of trees should not be the first consideration. Instead, tree managers should first take account of the usage of the land on which the trees stand, which in turn will inform the process of assessing the trees.

The Quantified Tree Risk Assessment (QTRA) system applies established and accepted risk management principles to tree safety management. Firstly, the targets (people and property) upon which trees could fail are assessed and quantified, thus enabling tree managers to determine whether to assess trees and to what degree of rigour a survey or inspection of the trees is required. Where necessary, the tree is then considered in terms of both size (potential impact) and probability of tree or branch failure. Values derived from the assessment of these three components (target, size and probability of failure) are combined to calculate the probability of significant harm occurring.

The system moves the management of tree safety away from labelling trees as either 'safe' or 'unsafe' and requiring definitive statements of tree safety from either tree surveyors or tree managers. Instead, QTRA quantifies the risk of harm from tree failure in a way that enables tree managers to balance safety with tree value and operate to predetermined risk thresholds.

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- Habitats Management