EA Houghton Mill,
Mill Street,
Houghton,
Huntingdon,
PE28 2AZ



Client: Environment Agency
REF: TCR/704

Report compiled by The CGM Group (East Anglia) Ltd

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Qualifications and Experience of Surveyor

Introduction

1. **Qualification and Experience**
   I have based this report on my site observations and have come to any conclusions in light of my arboricultural experience. I have listed my qualifications and given a brief description of my arboricultural experience in Appendix C.

2. **Instruction**
   I have been instructed by the Environment Agency (referred to as the client from here on), to carry out a tree condition report of the trees located at EA Houghton Mill, Mill Street, Houghton, Huntingdon, PE28 2AZ.



3. **Relevant Background Information**
   There is no background information, this is a baseline tree inspection for health & safety purposes. I have not received a tree policy for this site.

4. **Documents and Information Provided**
   None.

5. **Scope of This Report**
   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.

6. **Mapping**

I have created a tree location plan to show the location of the trees located within the boundaries of EA Houghton Mill, Mill Street, Houghton, Huntingdon, PE28 2AZ.

Site plans and the locations of the trees can be located in Appendix B

7. **Technical References**
This arboricultural report is based on the following primary technical references:

- British Standards Institution (2010) *BS:3998 Recommendations for tree work*
- Watson, P (2022) *A-Z of Tree Terms Compendium to British Arboriculture Third Edition*
- Lonsdale, D. (1999) *Principles of Tree Hazard Assessment and Management.*
- Mattheck, C and Breloer, H. *The Body Language of Trees*
- Strouts, R.G. and Winter, T.G (1994). *Diagnosis of Ill-Health in Trees*
- Weber, K and Mattheck, C. *The Manuel of Wood Decay in Trees*
- The National Tree Safety Group. (2011). *Common Sense Risk Management of Trees.*
- Biddle. P.G. (1998). *Tree Root Damage to Buildings V1 & V2*
- Roberts, J. Jackson, N and Smith, M (2006). *Tree Roots in the Built Environment*.
- Mynors, C, Hall, S and Nicholls, E (2023) - *The Law of Trees, Forests and Hedges Third Edition.*
- Humpheries, D, Wright, C. (2021) – *Fungi on Trees, A photographic reference.*
- Boddy, L (2021) – *Fungi and Trees, Their complex relationships.*

Limitations

8. **Survey**
   The inspection was carried out from ground level using a VTA (Visual Tree Assessment) method. All visual observations and recommendations relate to the condition of the trees on the day of the survey. Unusual weather conditions, changes in soil, soil level and changes to surroundings may result in a dramatic change in the trees health and a new survey would be appropriate in this event.

9. **Time Limit**
   Due to the changing nature of trees and other site circumstances, this report and any recommendations made are limited to particular time scales (noted in the tree assessment document). Any major alteration to the site and any development proposals could change the current circumstances and may invalidate this report.

10. **Tree Health**
    Trees are dynamic structures that can never be guaranteed to be 100% safe. Even in good condition they can suffer damage under average conditions. Regular inspections can help identify potential problems before they become acute.

11. **Justification of Works**
    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.

12. **Buildings**
    At the time of the survey there were multiple buildings, footpaths, public highways and structures within influencing distance of the trees surveyed.

Site Visit and Observations

13. **Site Visit**
    I carried out an unaccompanied site survey on 17/12/2023. All of my observations were taken from ground level using VTA (Visual Tree Assessment). During my time on site, the weather was dry but cloudy.

14. **Brief Site Description**
    The site is located to the east of Huntingdon south of the village of Houghton. There were 4 trees and one group of small trees on the site.

    The soil type on site is shown to be the Oxford Clay Formation- mudstone. This soil type exhibits a high shrink/swell potential and as such NHBC and BRE guidance should be adhered to in the event of new development or planting on site in terms of design and tree water demand.

15. **Identification and Location of the Trees**
    I have illustrated the location of tree on the map included in Appendix B. This plan is for illustrative purposes only and it should not be used directly for scaling or measurements.

16. **Systematic Method of Assessment**
    I have visually inspected the x4 individual trees and x1 group of trees at EA Houghton Mill, Mill Street, Houghton, Huntingdon, PE28 2AZ.

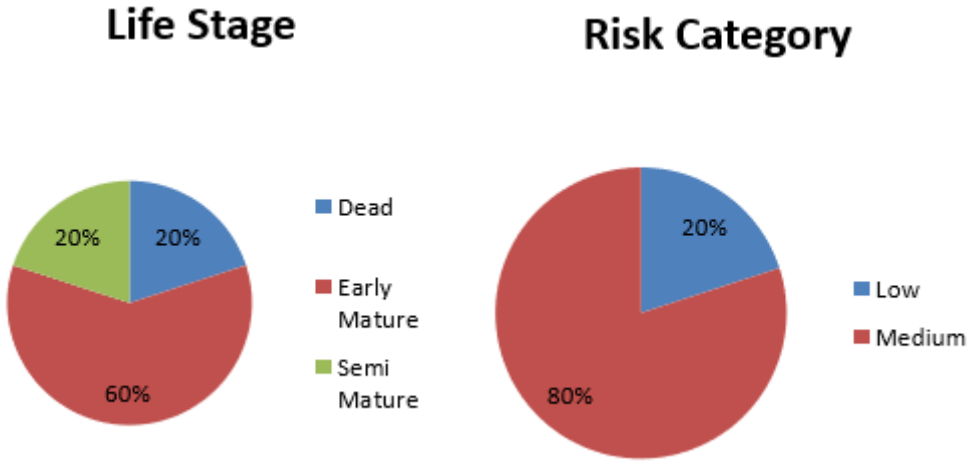
- A distance visual assessment of the tree taking into account the overall shape, form, foliage colour appropriate for the time of year and any other elements that do not appear normal for that particular species.
- Exposure to weather. This can be due to it being a solitary tree or that's surrounding 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 trees history or history of the surrounding trees / landscape. For example: previously failed limbs, surrounding tree removal / failure, excavations, 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.

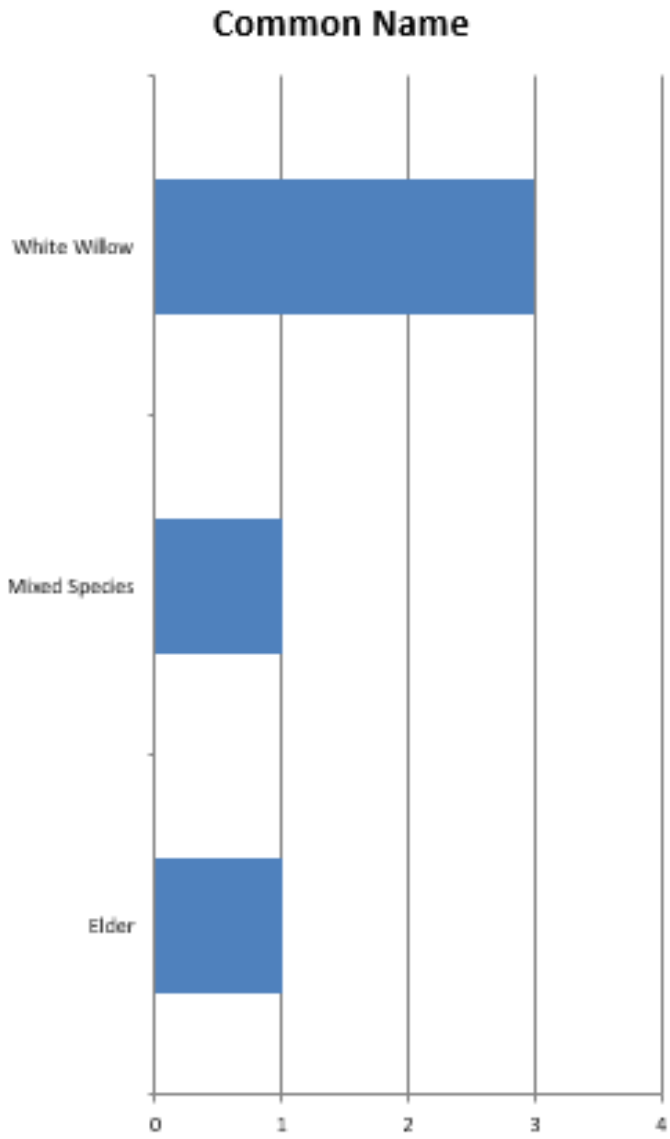
From this information, an assessment is made of the likelihood of the part/s most likely to fail in relation to the target/occupancy value within the trees failure area and recommendations are then made, these can include the following but are not exhaustive:-

- 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.

The primary reasoning behind this method of assessment is to identify a foreseeable failure, make an informed decision and act on it within a specified time and know that the response is reasonable in relation to the target area and the financial resources available.

17. **General Tree Assessment**
The stock on site was noted to be of a good bio diversity in terms of species and age range. Ample opportunity exits for further planting at this site.




Common Name
White Willow
Mixed Species
Elder
0
1
2
3
4

Recommendations

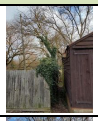
18. **Present requirements**
    Any works required to establish acceptable levels of risk for the site and to maintain the trees in line with good arboricultural management are listed in a priority scale and should be carried out within the time scale indicated. These lists of works are designed to highlight dangerous situations and are necessary for safety reasons or to establish high levels of arboricultural management to the existing trees.

    REASONING: Proactive intervention rather than reactive to failure.

Tree Survey Recommendations

Client: The Environment Agency
Site: Houghton Mill

Timescale	No. Recommendations
A/4 (Immediate Actio	1
B/3 (Within 6 Months	1
C/2 (Within 18 Montl	2
Total	4

Ref.	Species	Description	Measurements	Recommendation	Work Timescale	Photo
T004	Elder *(Sambucus nigra)*		Height (m): 6.0 Crown Radius (m): 2.0 DBH (cm): 10 Life Stage: Dead	Fell tree.	17-Dec-2023 (A/4 (Immediate Action))	
T002	White willow *(Salix alba)*		Height (m): 11.0 Crown Radius (m): 4.0 DBH (cm): 80 Life Stage: Early Mature	Reduce lateral crown spread to the southwest	17-Jun-2024 (B/3 (Within 6 Months))	
G001	Mixed species *(Mixed species)*		Height (m): 4.0 Crown Radius (m): 2.0 DBH (cm): 10 Life Stage: Semi Mature	Crown raise over footpath to 3m above ground level to allow easier access	17-Jun-2025 (C/2 (Within 18 Months))	
T003	White willow *(Salix alba)*		Height (m): 9.0 Crown Radius (m): 4.0 DBH (cm): 100 Life Stage: Early Mature	Repollard back to previous points	17-Jun-2025 (C/2 (Within 18 Months))	

Other Considerations

19. **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.

20. **Tree Preservation Order (TPO) and Conservation Area (CA)**
    A Tree Preservation Order, referred to as a 'TPO', is an order made by a Local Planning Authority ('LPA') in respect of trees or woodlands. The principal effect of a TPO is to prohibit the cutting down, uprooting, topping, lopping, wilful damage, or wilful destruction of trees without the LPA's consent. The cutting of roots is potentially damaging and so, in the Secretary of State's view, requires the LPA's consent. Anyone who, in contravention of a TPO, wilfully damages a tree 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 a Magistrates Court, to a fine of up to £20,000. In serious cases a person may be committed for trial in a Crown Court and, if convicted, is liable to an unlimited fine.
    Conservation Areas are areas of special architectural or historical interest with a character or appearance that is desirable to preserve or enhance. Trees may often contribute to the special character of that area. All trees in a Conservation Area are subject to controls which enable the LPA to protect the special character of the area created by the trees.
    If trees have a specific Tree Preservation Order (TPO) on them, then the normal Tree Preservation Order controls apply. You must give the LPA six week's notice, in writing, of your intention to carry out any work to trees in a Conservation Area. You must not carry out any work during this six-week period, which starts from the date of receipt of your notification by the council, unless you receive written permission to do so. Work which is not exempt and is carried out without formal notification or within the six-week period without the written consent of the council is illegal. The LPA may prosecute offenders and fines of up to £20,000 for each tree may be imposed by a Magistrates Court in the event of offenders being convicted of an offence. If proceedings are instituted in a Crown Court then fines are unlimited. There is also a duty to replace any tree removed without permission.

21. **Local authority details**
    For reference the contact details are listed below for Huntingdonshire District Council:

    Huntingdonshire District Council
    Pathfinder House
    St Marys Street
    Huntingdon

PE29 3TN

22. **Correspondence with local arboricultural / planning officer**
    None.

23. **Tree works**
    All relevant biosecurity measures should be employed when completing any works.

24. **Implementation of works**
    Any tree works should be carried out to BS:3998 Recommendations for Tree Work as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Their Register of Contractors is available free from:

    Arboricultural Association,
    The Malthouse,
    Stroud Green,
    Standish,
    Stonehouse,
    Gloucestershire
    GL10 3DL

    UK Tel: +44 (0)1242 522152

    Email: admin@trees.org.uk

    Website: www.trees.org.uk/contractors.htm

    Fax: +44 (0)1242 577766

25. **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.

26. **Statutory Wildlife Obligations**
    The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence.

27. **Future considerations**
    Any remaining trees should be inspected on a regular basis by a qualified arboricultural consultant and should not exceed a 5-year interval.
28. **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 air-space (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 fibers 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 vigor 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 degrades 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 - Noninvasive 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 lignifications (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 attacks 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 A – Tree Schedule

See attached

- For convenience, the schedule has been ordered into works recommendation timescales.

Site Name:	The name of the Tree Site that is/will be recorded in AIMS: Inventory
AIMS Asset ID:	AIMS Asset ID of site if an existing Tree Site. [NB. For a new Tree Site, AIMS Asset ID will be generated when site created in AIMS]
National Grid Reference (NGR):	The 8 figure (minimum) NGR to accurately locate the Tree Site
Site Usage Zone:	The Site Usage Zone determined for the site
Weather:	Brief description of weather conditions at time of inspection
Inspection Date:	Date inspection carried out on site
Inspected by:	Full name of Level 1 Tree Inspector or Level 2 Tree Assessor completing the inspection
Site Type:	'Tree' when there is a single tree on the site or 'Tree Group' when the site contains more than 1 tree
General Comments/Description:	Comments and description of the site as required
Supporting Information:	Photos, plans, sketches and maps to identify the site and significant site issues that will assist with the inspection
Tree No:	Only as required: Identify each individual tree with a sequential number/tree tag, e.g. to aid re-inspection or where works are needed
Location:	Site specific information that helps to locate the specific tree, e.g. NGR, or description
Species:	Common name if recognised, or description (e.g. 'Conifer', 'Broadleaf')
Height:	Tree height in metres, approximately measured to top of the crown
Comments:	Record all obvious visible defects and provide a summary of visual inspection (e.g. recent pollard, minor deadwood in crown, rooted from river bank edge)
Action:	Record what further action is required, e.g. detailed assessment or remedial works - If none, state 'None'
Inspection Condition Rating:	**Enter Inspection Condition Rating as follows:** **A / 4**: Trees that pose an imminent risk - remedial action must be taken immediately. **B / 3:** Remedial action must be completed within 6 months of the Inspection/Assessment. **C / 2:** Remedial action must be completed within 18 months of the Inspection/Assessment. **D / 1**: No remedial action required before the next programmed Inspection.

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Tree Survey

Client: Environment Agency
Site: EA Houghton Mill

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Tree Number	Tree Location	Tree Species	Measurements	Comments	Action	Condition Rating
G001	TL 28087.85 71930.62	Mixed Species *(Mixed Species)*	Height (m): 4.0 Crown Radius (m): 2.0 DBH (cm): 10 Life Stage: Semi Mature	Consisting of Hawthorn, Elder and Ash Located adjacent to footpath. Minimal overhang	Crown raise over footpath to 3m above ground level to allow easier access	C/2 (Within 18 Months)
T001	TL 28087.43 71941.51	White Willow *(Salix alba)*	Height (m): 11.0 Crown Radius (m): 4.0 DBH (cm): 40 Life Stage: Early Mature	Tag 031 Overhanging outbuilding Minimal targets and away from nearest footpath Basal inspection restricted due to ground vegetation No obvious signs of defects	No action required.	D/1 No Action
T002	TL 28087.14 71934.20	White Willow *(Salix alba)*	Height (m): 11.0 Crown Radius (m): 4.0 DBH (cm): 80 Life Stage: Early Mature	Tag 030 Overhanging outbuilding and water ramp Minimal targets, primarily over waterside Basal inspection restricted due to ground vegetation and ivy Multiple stem at 0.5m above ground level Minor deadwood	Reduce lateral crown spread to the southwest	B/3 (Within 6 Months)
T003	TL 28099.35 71926.37	White Willow *(Salix alba)*	Height (m): 9.0 Crown Radius (m): 4.0 DBH (cm): 100 Life Stage: Early Mature	Tag 029 Overhanging outbuilding and water ramp Minimal targets, primarily over waterside Basal inspection restricted due to ground vegetation and ivy Lapsed pollard at 2.5m above ground level	Repollard back to previous points	C/2 (Within 18 Months)
T004	TL 28081.69 71946.71	Elder *(Sambucus nigra)*	Height (m): 6.0 Crown Radius (m): 2.0 DBH (cm): 10 Life Stage: Dead	Dead self set located between fence and hut Potential footpath target No tag	Fell tree.	A/4 (Immediate Action)

Appendix B – Tree Location Plan

See attached. To be printed in A4.


The Environment Agency
Houghton Mill
Page size: A4
1 : 428
0
10 m
20 m
N
CGM GROUP
Enhancing Your Environment
Houghton Boats
River Great Ouse
T004
T001
T002
G001
T003
Footbridge and lock
Map data ©2023 Google

Appendix C - Qualifications and experience of surveyor

Brief details of qualification and experience of Rory Hobbs

- LANTRA Professional Tree Inspection Award
- BS:5837 Tree Surveying and Categorisation
- BS:8586 2015 Surveying Bats in Trees and Woodland

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)
22.10.16	ABC	Emergency First Aid at Work + F
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
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

I have worked in Arboriculture for over 18 years, with many years' experience as a practitioner and moving on to surveying and consultancy. 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 their Highways England Areas 6 and 8 contract. In this role, I was responsible for the management of over 7 million roadside trees. I launched RH Tree Consultants Ltd in 2018.