Tree Survey Report

The Caradoc Estate
Full Estate Survey

Report prepared by:

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1 Report Limitations

1.1 This report represents the analysis of arboricultural observations following an external assessment of the trees from ground level only. No samples were collected for analysis, and no decay detection devices (such as an increment borer, a micro-resistance recording drill or sonic tomograph) were used during the assessment.

1.2 Trees are living organisms and their condition may have changed after our consultant left the site for any one of a variety of reasons, including for example, but not limited to:

- a natural consequence of their pattern of growth, and/or
- a response to changes in neighbouring trees and shrubs, from whatever cause, and/or
- in response to the weather, either an extreme event or a prolonged spell of consistent weather, and/or
- a consequence of infection or infestation, and/or
- a consequence of a pollution incident, and/or
- a response to changes in soil condition or structure.

1.4 Conclusions drawn, and any recommendations flowing from those conclusions, relate to the conditions that were found at the time of the assessment, and are valid for

- no more than two years from the date of that assessment, or
- until such time as any work is carried out at the site, either in accordance with the remedial action prescribed or for other reasons which may be outside of PRS' control, or
- until the site is re-surveyed, whichever is the sooner.

1.5 This report is prepared solely and exclusively for the person to whom it is addressed, and its contents must not be divulged to third parties without the written consent of Pryor & Rickett Silviculture Ltd. Any third party referring to this report or relying on the information contained therein does so entirely at their own risk.

1.6 The report relates only to those trees growing within the areas of survey, either as shown on the enclosed plan or as listed in the tree schedule. Trees beyond the survey area were not inspected.

1.7 No guarantee can be given as to the absolute safety or otherwise of any individual tree. Extreme climatic events can cause damage to (or make unsafe) apparently healthy trees.

1.8 Trees were inspected externally: no instruments (such as ultrasound or resistographs) were used to examine the tree internally.

1.9 No underground or root system inspections were carried out and Pryor & Rickett Silviculture Ltd were not aware of any underground conditions of compaction or changes in ground levels or aeration or drainage which may affect the trees, nor of any services, installations or any other excavations which may previously have taken place, and which may have caused damage to root systems.

1.10 No investigation has been carried out to determine whether the land under report is or has been in the past contaminated or polluted by any substances or organisms however occurring. This report and any recommendations are therefore on the basis that all the land and its environs are free from any such contamination or pollution and that no such polluting materials will be introduced onto the site or used during any construction works on the site.

1.11 The survey is based on information and maps supplied by the client relating to site boundaries, hazards, utilities, etc. Any required information not provided is at the assumption of the surveyor. No responsibility can be accepted relating to the accuracy of this information.

1.12 It should be assumed that no additional investigation was undertaken with regard to statutory designations, i.e., TPO, Conservation Areas, SSSIs, other than information and documents supplied by the client.

Approval for felling or other work may require authorisation; such authorisation is not the responsibility of Pryor & Rickett Silviculture Ltd and must be obtained by the client before felling or cutting commences.

1.13 Pryor & Rickett Silviculture Ltd undertake no responsibility for any damage, loss or injury arising from any action undertaken in response to this survey.

2. Assumptions and Legal Limitations

2.1 Any legal description provided to the surveyor is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

2.2 It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations or statutes.

2.3 Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the surveyor can neither guarantee nor be responsible for the accuracy of information provided by others.

2.4 The surveyor shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

2.5 Loss or alteration of any part of this report invalidates the entire report.

2.6 Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the surveyor.

2.7 Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of Pryor & Rickett Silviculture Ltd - particularly as to value conclusions, identity of the surveyor, or any reference to any professional society or institute or to any initialled designation conferred upon the surveyor as stated in their qualification.

3. Scope of Inspection

- Site Name: Name of Property and/or Site.
- Date: Date the tree was inspected.
- Surveyor: Name of the surveyor who carried out the inspection.
- Tree Reference: The sequential number shown on map.
- Grid Reference: The tree's physical geographical position.
- Species: The botanical and common name of the tree.
- Age Class: Age category of tree based on experience:

  Young – still within the establishment phase;

  Semi-Mature – established though not at full size;

  Mature – at, or near to full size;

  Over Mature – old for species, in natural decline.

- Height : Estimated height range from ground level.
- Crown Spread: Estimated spread of the crown at its widest point.
- DBH: Diameter of the tree's main steam at breast height (1.5m above ground level on the highest side).
- Condition: Current general health and form of the tree:

  Poor - Poor health and vigour with significant defects requiring major works, felling or close monitoring to ensure safety.

  Moderate - Reasonable health, vigour and form. Some minor defects may be present including deadwood, damaged limbs, and small areas of decay, but defects can be remediated.

  Good - Good health, vigour, and form and free from significant defects.

  Standing Dead - The tree is deceased but still standing.

- Defects: Biological and potential structural failure items visible.
- Location: The position of the noted defect upon the tree.
- Hazard Scoring: As per the guidance above; hazard ratings are assigned.
- Targets: Identification of relevant factors and possible targets.
- Recommendations: Prescriptions based upon the tree condition and hazard rating.
- Work Time: Estimated time remedial works will take in hours.
- Priority: A low, Medium, or High rating highlighting the urgency

remedial action should be employed.

- Access: The methods available with which to gain access into the tree.
- Next Inspection: Notice if future inspections will be necessary, and the time scale required to complete.

2 The Trees

This report was commissioned with a focus on overall tree health and condition, with a baring on the safety of the trees for the owners of the property, together with the risk to members of the public as users of the footpaths, bridleways and other Public Rights of Way (PRoW) throughout the property.

This report was commissioned with a focus on all trees, together with Ash trees (*Fraxinus excelsior*), especially those trees which were exhibiting signs of Ash Die Back.

From the Forest England website:

*Ash dieback is a highly destructive disease of ash trees (*Fraxinus *species), especially the United Kingdom's native ash species, common ash (*Fraxinus excelsior*). It is caused by a fungus named* Hymenoscyphus fraxineus *(*H. fraxineus*), which is of eastern Asian origin.*

The disease is also known as 'chalara', ash dieback, and chalara dieback of ash. Calling it 'chalara' ash dieback helps to distinguish it from dieback on ash trees caused by other agents.

The asexual phase of the fungus's life cycle was formerly known as Chalara fraxinea*, hence the name of the disease, and the sexual phase was called* Hymenoscyphus pseudoalbidus*. Some older scientific, technical and policy documents which are still consulted use these earlier names.*

The full results of the survey are detailed in the appendix at the end of this report. However, the highest priority trees are detailed below.

3 Conclusions

The trees surveyed form part of a large number of trees of all age categories within the Caradoc Estate, providing amenity, enjoyment and a pleasing aesthetic for the users of the property together with members of the public.

The trees recommended for remedial works above are the trees who have the highest priority. Several of the trees above where works are required could be completed internally by suitably qualified and competent persons (ie persons with the appropriate chainsaw 'tickets' and experience). The majority will be handled from a forestry angle, removed as part of large-scale thinning/harvesting operation(s). A small number will require a professional arborist for their work/removal, due to their location and/or the technical nature of the work.

The information contained within this report are recommendations for the best course of action. Failure to take action, has the potential to have undesirable consequences to members of the public and residents.

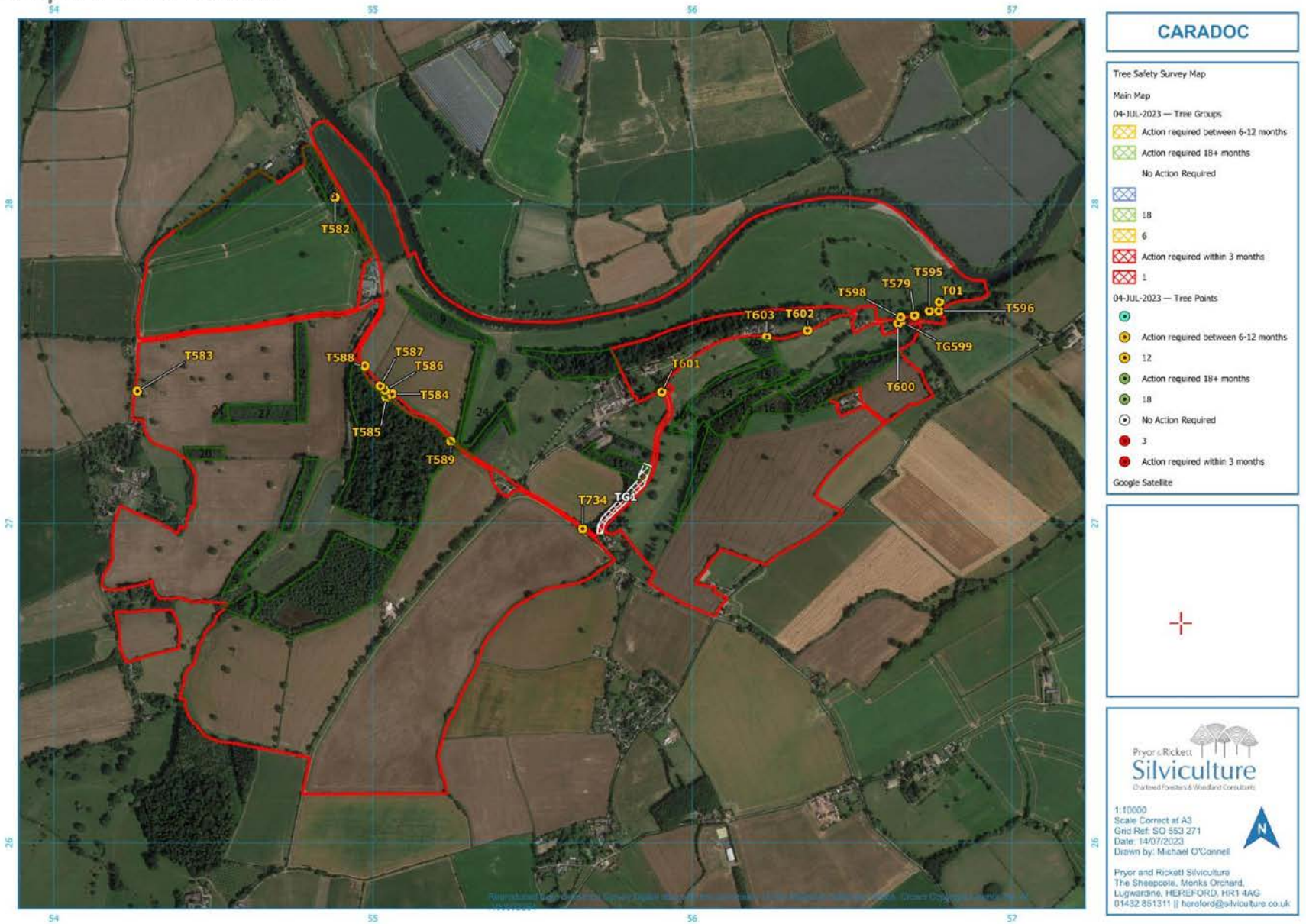
PRS can offer the additional service of sourcing a reputable local contractor to carry out the remedial works and supervise those works, during and once completed. The cost of this can best discussed once a course of action has been decided and agreed upon.

Appendix 1 – Full Survey

No.	Common Name	Species	Structure	Num. Stems	Measurements	Description	Survey Notes	Condition	What3Words	10 Digit GR	Recommendations	Priority (months)
T01	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 12 DBH (cm): 50 Life Stage: Mature	Field tree. Footpath under dripline	ADB clearly present, cat early 3	Fair	icon.crimson.skate	SO 56770 27693	Remove limb as marked- see image	12
T582	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 15 DBH (cm): 50 Life Stage: Mature	Woodland tree set on bank high above road. Enter woodland at ///group.occur.back & bare right to locate tree. Crossed hazel sticks, painted green, bare right again.	Tree is windblown, failed and hung up in neighbouring trees. See image	Poor	chugging.cadet.cafe	SO 54903 28024	Fell and process tree	6
T583	Common Ash	*Fraxinus excelsior*	Tree	2	Height (m): 16 DBH (cm): 100 Stems: 2 Life Stage: Mature	Hedgerow/boundary tree. Road under dripline	Tree standing dead as a result of ADB infestation. Significant volume of ivy to base preventing detailed inspection	Dead	saving.modifies.successes	SO 54263 27413	Fell tree	12
T584	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 12 DBH (cm): 30 Life Stage: Semi Mature	Field margin tree. Road just outside dripline	ADB clearly present, cat 4	Poor	dislikes.sending.good	SO 55062 27401	Fell tree	6
T585	Common Ash	*Fraxinus excelsior*	Tree	2	Height (m): 8 DBH (cm): 20 Stems: 2 Life Stage: Young	Woodland compartment edge tree	Standing dead tree as a result of ADB infestation	Poor	hulk.relocated.crusaders	SO 55041 27394	Fell tree with T584	6
T586	Common Ash	*Fraxinus excelsior*	Multi-Stemmed	3	Height (m): 15 DBH (cm): 30 Stems: 3 Life Stage: Mature	Field margin tree. Road just under dripline	ADB clearly present, cat 3	Poor	mango.cold.supposing	SO 55038 27416	Fell tree with T584	6
T587	Common Ash	*Fraxinus excelsior*	Tree	2	Height (m): 12 DBH (cm): 80 Stems: 2 Life Stage: Mature	Field margin tree. Road just outside dripline	ADB clearly present, early cat 3	Fair	slice.televise.purest	SO 55029 27424	Fell tree with T584	6
T588	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 8 DBH (cm): 40 Life Stage: Semi Mature	Field margin tree. Road just outside dripline	ADB clearly present, cat 4	Poor	mallets.misted.spring	SO 54974 27493	Fell tree	6
T589	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 18 DBH (cm): 50 Life Stage: Mature	Woodland compartment edge tree. Road under dripline	ADB clearly present, early cat 3. Volume of mistletoe to upper crown. Significant volume of ivy to stem from ground level	Poor	disprove.remover.bonus	SO 55243 27256	Fell tree	12
T595	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 18 DBH (cm): 50 Life Stage: Mature	Field tree. Road and BT line within 1xHt	ADB clearly present, cat 3, early 4	Poor	corrects.graphics.backward	SO 56740 27665	Fell tree	12
T596	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 12 DBH (cm): 40 Life Stage: Mature	Hedgerow tree. Road and footpath gate under dripline. Road, BT line and footpath stile within 1xHt	ADB clearly present, cat 3, early 4. Significant volume of ivy to stem	Poor	shine.throwaway.busters	SO 56770 27666	Fell tree	12

T597	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 12 DBH (cm): 40 Life Stage: Mature	Hedgerow tree. Road and footpath gate under dripline. Road, BT line and footpath stile within 1xHt	ADB clearly present, cat 4. Significant volume of ivy to stem. Poor form tree. See image	Poor	clicker.egging.former	SO 56694 27651	Fell tree	12
T598	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 12 DBH (cm): 40 Life Stage: Mature	Hedgerow tree. Road under dripline. BT line running through crown	ADB clearly present, cat 4. Significant volume of ivy to stem. Poor form tree. See image	Poor	rich.unique.mentioned	SO 56650 27646	Fell tree	6
T600	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 12 DBH (cm): 40 Life Stage: Early Mature	Woodland compartment edge tree. Road under dripline	ADB clearly present Cat 3, early 4	Poor	shuttling.woods.kipper	SO 56641 27625	Fell tree	12
T601	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 18 DBH (cm): 40 Life Stage: Mature	Driveway under dripline	ADB clearly present, cat 4. Poor form tree, possibly self-set, which has competed with neighbouring Sycamore	Poor	unusable.mountain.tequila	SO 55906 27410	Fell tree	6
T602	Common Ash	*Fraxinus excelsior*	Tree	1	Height (m): 15 DBH (cm): 90 Life Stage: Mature	Hedgerow tree. Bridleway under dripline	ADB clearly present Cat 4. Stem sounds poorly and hollow with mallet. Significant deadwood throughout crown.	Poor	publisher.orange.punctual	SO 56360 27600	Fell tree	6
T603	Not identified	*Not identified*	Tree	2	Height (m): 8 DBH (cm): 25 Stems: 2 Life Stage: Dead	On small bank above footpath	Standing dead	Dead	spit.crows.sandwich	SO 56231 27580	Fell tree	12
T734 (old tag)	Pedunculate Oak	*Quercus robur*	Tree	1	Height (m): 18 DBH (cm): 130 Life Stage: Veteran	Shelter belt tree, set on bank high above road. Base is 2m above road	1x large deadwood over road	Good	tonsils.serves.populate	SO 55657 26985	Remove 1x deadwood	6
TG1	Broad-leaved Lime	*Tilia platy-phyllos*	Group	1	Height (m): 20 DBH (cm): 80 Life Stage: Mature	Driveway limes	Trees would benefit from a minor deadwood removal and crown lift above driveway	Good	directive.breeze.superhero	SO 55795 27082	Discretionary crown lift and minor deadwood removal	24
TG599	Common Ash	*Fraxinus excelsior*	Group	2	Height (m): 12 DBH (cm): 30 Trees: 2 Life Stage: Semi Mature	2 trees, 4 stems in woodland compartment above road. Road within 1xHt	ADB clearly present, cat 4	Poor	width.evenly.asserts	SO 56662 27628	Fell tree	12

Appendix 2 – Maps of Tree Locations



Appendix 3 – Tree Photos

T582 – above – a rootplate failed Ash set high above the road, which can just be made out by the arrow. This tree will require a technical and complex operation due to the trees' location.

T01 – above – an in-decline Ash above a footpath, which can be seen as the dirt trail to the left of the image.

T598 – above – an Ash in significantly declined condition above a road.

T601 – above – a tree at the top of the driveway to the main house, with the driveway under the dripline. It is likely self-set and is a very poor form tree.

T603 – above – two standing dead stems on the bank above the bridleway that runs parallel to Caradoc Meadow

T734 – above – is a mature Oak over the road between Red Rail and Dadnor. This tree is recommended for a single deadwood removal, as indicated by the red arrows.

T597 – above – an Ash in significant decline, above a road. This tree is recommended for removal.

Appendix 4 – Glossary of Terms

1. **Aerial platform** - Mechanised boom platform used to place a worker in close proximity to a tree's crown.
2. **Appeal** - The process by which a landowner, occupier or their agent can request that the secretary of state and or the courts consider that the LPA decision should be overturned in their favour.
3. **Arboricultural implication survey** - process of recording information on trees, usually on a construction site for the future protection and management of these trees.
4. **Area order** - Imposes the requirement consent to be granted prior to tree work being carried out.
5. **Bark tracing** - Cutting away torn or injured bark to leave smooth edge.
6. **Bracing** - Installation of flexible cables to support weak structures in trees.
7. **Bracing rod** - Metal rod used to support weak sections or crotches of a tree.
8. **Branch bark ridge** - Area of a tree's crotch where the growth and development of the two adjoining limbs pushes the bark into a ridge.
9. **Branch collar** - Area where a branch joins another branch/the trunk: created by the respective overlapping of xylem tissues.
10. **Broadcast fertilisation** - Application of fertiliser over the soil surface.
11. **Buttress roots** - Roots at the base of the trunk; trunk flare.
12. **Cable bracing** - Installation of a support system for weak branches or crotches.
13. **Callus growth** - Undifferentiated growth of cells at the edges of wounded areas on trees (see wound wood).
14. **Canker** - Localised, often disrupted and discoloured (area on stems and branches).
15. **CODIT** - Model of compartmentalisation of decay in trees.
16. **Co-dominant branches** - Forked branches of the same size.
17. **Compaction** - Compression of soil which breaks down its structure and effects gaseous exchange and root growth.
18. **Compensation** - System for landowners to claim for a loss suffered due to decisions by the IPA or government.
19. **Conservation Area** - Works within a CA must be notified to the Local Planning Authority. Whereby the authority has a period of six weeks to consider whether the tree deserves a TPO.
20. **Construction Design & Management (CDM) regulations** - Process of ensuring that all health and safety regulations and other industry considerations are considered during the conception, design, construction, and maintenance of a construction project.
21. **Crown** - The above ground portions of a tree.
22. **Crown cleaning** - Removal of dead dying diseases crossing and hazardous branches and waterspouts from a tree.
23. **Crown reduction** - Method of reducing the height & spread of a tree by cutting branches to laterals that are large enough to support the growth of the limb.
24. **Crown rot** - Disease or decay at the base of a tree or root flare.
25. **Crown thinning** - Selective removal of unwanted branches and limbs to provide air/light penetration through the crown of a tree and to lighten the weight of the branches.
26. **Crumb structure** - A description of the soil texture used in identification of soil types.
27. **Deadwooding** - Removal of dead and dying limbs from a tree.
28. **Deciduous** -Trees and shrubs that lose their leaves in the autumn.
29. **Development control** - The section of the planning department that deals with planning applications for development.
30. **Design criteria** - Aspects of the site and required functions to be served by the plant that must be considered in plant selection.
31. **Drill-hole fertilisation** - Method of applying fertiliser into holes drilled throughout the soil within the root plate.
32. **Drip irrigation** - Method of watering in which water evaporation and run-off are minimised.
33. **Evergreen** - Having green foliage throughout the year.
34. **Excurrent** - Pyramidal growth habit.
35. **Expandable system** - In the context of bracing, a system which is elastic and therefore provides more support as the tree is subjected to greater loading by the wind.
36. **Extra high strength cable** - Type of cable used in supporting trees that is stronger, but less flexible than standard wrapped cable.
37. **Face cut** - The notch cut used in felling trees or limb.
38. **False crotch** - A device installed in trees to serve as a path for ropes in rigging.
39. **Felling licence** - Licence granted by the Forestry Commission to regulate the felling and sale of timber.
40. **Fertiliser** - Substance added to a plant or the surrounding soil to supplement the supply of essential elements.
41. **Fertiliser analysis** - The percentage of nitrogen, phosphorus, and potassium in a fertiliser.
42. **Fertiliser burn** - Injury to plants resulting from excess fertiliser salts in the surrounding soil.
43. **Field capacity** - Soil moisture content following the drainage of gravitational water.
44. **First schedule** - Identifies trees relating to a specific tree preservation order.

45. **Foliar analysis** - Laboratory analysis of the mineral content of foliage.
46. **Foliar application** - Application of a fertiliser by direct spray on the foliage.
47. **Food & Environmental Protection Act (FEPA)** - Regulations controlling the use and application of pesticides.
48. **Forestry Act** - The specific statutory instrument which regulates the planting, harvesting and control of non-amenity trees.
49. **Forestry Commission** - A government body responsible for implementing the UK forestry policy.
50. **Formative pruning** - Pruning young trees to create desired form and shape.
51. **Fresh wound parasite** - Pathogen that colonises freshly made wounds.
52. **Gall** - Swelling of plant tissues frequently caused by insects.
53. **Genus** - A group of species having similar fundamental traits.
54. **Girdling** - Inhibition of the flow of water and nutrients in a tree by "choking" vascular tissue.
55. **Ground rod** - 3 metre metal rod used in earthing, a lightning protection system.
56. **Gummosis** - Exudation of sap, often in response to disease or insect damage.
57. **Guying** - Securing a tree with ropes or cables fasten stakes in the ground.
58. **Hardiness** - Ability of a plant to survive low temperatures.
59. **Leader** - The primary terminal shoot or trunk of a tree.
60. **Hazard potential** - Likelihood or risk level relating to a perceived hazard.
61. **Health & Safety Executive** - Government body concerned with industrial safety matters.
62. **Health & Safety at Work Act (HSE)** - act of parliament regulate safety at work.
63. **Hearing/informal inquiry** - When an appeal against a LPA's decision is decided by written statements and an informal discussion of all parties in front of a government inspector.
64. **Heartwood** - Inner, non-functional xylem tissues.
65. **Honeydew** - Substance secreted by certain insects when feeding upon plants.
66. **Horizon** - Layer of soil within the soil profile.
67. **Hydrogels** - Crystalline polymers which absorb water.
68. **Implant** - Device or pellet which can be inserted into a tree to treat disorders.
69. **Included bark** - Bark that is pushed inside a developing crotch, causing a weakened structure.
70. **Increment borer** - Device used to take core samples from trees for the purpose of determining age or detecting problems.
71. **Infiltration** - Downward entry of water into the soil.
72. **Infiltration rate** - Speed at which water soaks into the soil.
73. **Lenticel** - Opening in the bark that permits the exchange of gases.
74. **Liquid injection** - Method of injecting liquid forms of fertiliser into the surrounding soil of a tree.
75. **Local Planning Authority (LPA)** - Department of local government with the statutory powers to protect trees.
76. **Local public inquiry** - The process in which appeals are decided by an inspector acting on behalf of the secretary of state in an open court which the public can attend and cross examination under normal rules of evidence apply.
77. **Mature height** - Height of mature trees as generally specified in tree identification manuals.
78. **Micro-injection** - Method used to introduce chemicals directly into the xylem of trees.
79. **Micronutrient** - An essential element required by plants in relatively small quantities.
80. **Minimum irrigation** - Use of minimal water in irrigation through the use of drought tolerant plants, and only watering when necessary due to reduced rainfall.
81. **Mycorrhizae** - A symbiotic association between a fungus and the roots of a plant.
82. **Native** - A species which has its origins within a specific country, e.g., Has not been introduced by man.
83. **Necrosis** - Localised death of tissue in a living organism needle- slender conifer leaf.
84. **Nematode** - Microscopic eelworm that often feeds on plant tissues and may cause disease.
85. **Non woody roots** - Fibrous absorbing roots that are produced at the end of woody roots.
86. **Nuisance** - Legal term referring to actionable problems created by trees in adjacent properties.
87. **Nutrient recycling** - The replacement of nutrients in the soil by the decomposition of organic matter.
88. **Organic** - A term used to imply natural substances or processes.
89. **Organic layer** - Layer of organic matter at the soil's surface.
90. **pH** - A measure of acidity or alkalinity.
91. **Plant Health Care (PHC)** - A holistic approach to maintaining trees and landscape plants in good health, focusing on the plant rather than specific pests.
92. **Permanent wilting point** - Point at which a plant cannot extract any more water from the soil.

93. **Physiological disorder** - Plant problem not caused by an insect, pathogen, or injury.
94. **Physiology** - The study of the life function (of a plant).
95. **Phototoxic** - Poisonous to plants.
96. **Pigment** - Substance that appears coloured due to the absorption of certain light wavelengths.
97. **Planning application** - Formal application by a tree/landowner submitted to the local planning authority to construct around/carry out works to protected trees/ woodlands.
98. **Planning condition** - Condition imposed by the local planning authority in connection with planning consent (see below).
99. **Planning consent** - Permission granted by the local planning authority to carry out pruning/felling on protected trees/woodlands which may be subject to planning conditions.
100. **Planning policy guidance** - Government publications that give guidance to LPA on how TPO/planning applications should be administered and decided.
101. **Plant growth substance** - Substance produced by a plant that affects physiological processes.
102. **Pollarding** - Pruning technique that begins on young trees, in which branches are continually cut back to callus knobs; used to maintain trees at a certain height.
103. **Props** - Solid support used to hold up a branch/tree which is in danger of failing.
104. **Pruning** - Cutting away unwanted parts of a plant.
105. **Reaction wood** - Wood formed in leaning or crooked stems, or on lower upper sides of branches.
106. **Reaction zone** - Area of wood which reacts and actively resists the growth and spread of micro-organisms.
107. **Refusal of consent** - When LPA's refuse consent to carry out tree works to a protected tree.
108. **Reporting of Injuries, Disease & Dangerous Hazards occurrences (RIDDOR)** – Obligation on under law for employers and employees to report accidents and incidents.
109. **Rhizosphere** - Immediate environment of roots where biological activity is high.
110. **Risk Assessment** - Requirement under the management of health & safety regulations to assess the risks in the workplace.
111. **Rod bracing** - Supporting weak structures using solid steel bars.
112. **Root ball** - Containment of tree root mass and soil.
113. **Root hair** - Modified epidermal cells of a root that aid in the absorption of water and minerals.
114. **Rust** - Disease caused by a certain group of fungi and characterised by reddish brown spots.
115. **Safety codes of practice** - Recommendations for industry best practice.
116. **Sanitation** - Practice of removing dead or diseased plant parts to reduce the spread of disease.
117. **Sapwood** - Outer wood that actively transports water and minerals.
118. **Scale** - One of a group of insects that attach themselves to plant parts and suck the sap.
119. **Scorch** - Browning and shrivelling of foliage, especially at the leaf margin.
120. **Second schedule** - A part of the model order for tree preservation orders that lists the exemptions that apply to the need to make an application to the local planning authority for consent to fell, prune or uproot a protected.
121. **Section 211 notice** - Informs the local planning authority of the intention to carry out works to trees within conservation areas.
122. **Seven drawn strand cabling** - Less flexible and less robust than other forms of cabling but allows a neat wrap and splice on small ornamental trees.
123. **Site analysis** - Determination of the conditions, environment and needs of a planting site.
124. **Sketch drawing** - A drawing to show which trees the tpo application affects.
125. **Slow-release fertiliser** - Fertiliser that is coated with an insoluble substance to release nitrogen over a long time period.
126. **Slowly soluble fertiliser** - Fertiliser formulation that is i slowly hydrolysed in the soil
127. **Soil amendment** - Material added to soil to improve its physical or chemical properties.
128. **Soil analysis** - Laboratory analysis of soil to determine pH, and mineral composition.
129. **Soil auger** - Device for removing cores of soil for inspecting or testing.
130. **Soil compaction** -Reduction of the total pore space in a soil, especially the macro pores.
131. **Soil profile** - Vertical section through a soil, across all of the horizons.
132. **Soil structure** - The arrangement of soil particles soil texture- the relative fineness or coarseness of a soil due to particle size.
133. **Species** - A group of organisms composed of similar individuals that can produce similar offspring.
134. **Staking** - Supporting a newly planted tree with stakes.

135. **Standard down conductor** - Length of copper cable used in lightning protection systems on trees.
136. **Statute law** - Act of parliament.
137. **Stress** - Condition in which a tree is not in good health.
138. **Stunting** - Reduction of growth.
139. **Subsidence** - Recoverable shrinkage of a soil due to desiccation.
140. **Symbiotic relationship** - Association between two organisms that is mutually beneficial.
141. **Systemic** - Acting throughout the entire organism.
142. **Tap root** - Central, vertical root that is often choked off by the development of other roots.
143. **Target pest resurgence** - Return of a pest problem to the host plant(s).
144. **Target pruning** - Final pruning cut made to the outside of the branch bark ridge and branch collar.
145. **Third schedule** - A part of the model order for tree preservation orders that gives details of the appeal procedures which are required if; a landowner or their agent wish to object to a refusal and or conditions of consent; when a LPA wish to modify or revoke a consent they have already issued; this section also states that the duty of replacement planting is passed on to subsequent owners of the land on which the trees stand.
146. **Topping** - Cutting back a tree to buds, stubs, or laterals not large enough to assume the terminal role. Considered bad arboricultural practice.
147. **Town & country planning act -** Covers the duties of local planning authority in respect of statutory tree.
148. **TPO -** Tree Protection Order, protecting the tree from works being undertaken without consent from the Local Authority Planning department.
149. **Transplanting** - Moving a plant to a new location.
150. **Transplant shock** - Stress following transplanting in which growth is reduced and the tree may wilt or drop foliage.
151. **Tree island** - Soil or landscape surrounding a tree such as within a paved area.
152. **Tree preservation order** - A specific instrument to protect amenity trees and woodlands.
153. **Tree spade** - Mechanical device used to dig and move trees.
154. **Tree wrap** - Material used to wrap the trunks of newly planted trees.
155. **Undercut** - Cut on the underside of a limb to be removed / to prevent “peeling” (of bark & vascular tissue).
156. **Vascular discolouration** - Darkening of the vascular tissues of woody plants in response to disease.
157. **Vector** - Organism that transmits a pathogen.
158. **Vertical mulching** - Filling vertical drilled holes in the soil with materials such as gravel, perlite, peat substitute or sand.
159. **Water holding capacity** - Ability of a soil to hold moisture.
160. **Water insoluble nitrogen** - Nitrogen fertiliser in a form i that is not soluble in water.
161. **Water retentive polymers** - Crystals that attract water molecules and have been used to some degree to help retain water in the root zone of plants.
162. **Water shoot** - A secondary, upright shoot arising from the trunk, branches or roots of a plant.
163. **Whorled** - Leaves arranged in a circle around a point on the stem.
164. **Wilt** - Loss of turgidity and subsequent drooping of leaves.
165. **Witches’ broom** - Plant disorder in which a large number of accessory shoots develop.
166. **Woody roots** - Lignified, usually large roots which provide a tree with mechanical support.
167. **Wound wood** - Differentiated cells (tissue) at the edge of wounded areas on trees.
168. **Written representations** - When an appeal against a LPA’s decision is decided by written statements only.

Appendix 5 – Legislation

Health and Safety at Work etc. Act (1974)

Chapter 37: Section 2

'It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health safety and welfare at work of all his employees.'

'...the matters to which that duty extends include in particular...

...so far as is reasonably practicable as regards any place of work under the employer's control, the maintenance of it in a condition that is safe and without risks to health and the provision and maintenance of means of access to and egress from it that are safe and without such risks.'

Management of Health and Safety at Work Regulations (1999)

Regulation 3: Risk Assessment

'Every employer shall make a suitable and sufficient assessment of:

a) *The risks to the health and safety of his employees to which they are exposed whilst they are at work; and*

b) *The risks to the health and safety of persons not in his employment arising out of or in connection with the conduct by him of his undertaking.'*

Occupiers' Liability Act (1957)

Chapter 31: Section 2: Extent of occupier's ordinary duty

An occupier of premises owes the same duty, the common duty of care, to all his visitors....

The common duty of care is a duty to take such care as in all the circumstances of the case is reasonable to see that the visitor will be reasonably safe in using the premises for the purposes for which he is invited or permitted by the occupier to be there.'

Occupiers' Liability Act (1984)

Chapter 3: Section 1

'An occupier of premises owes a duty to another (not being his visitor) in respect of any such risk...

a) He is aware of the danger or has reasonable grounds to believe that it exists;

b) He knows or has reasonable grounds to believe that the other is in the vicinity of the danger concerned or that he may come into the vicinity of the danger (in either case, whether the other has lawful authority for being in that vicinity or not); and

c) The risk is one against which, in all the circumstances of the case, he may reasonably be expected to offer the other some protection.'

Highways Act (1980)

Part V: Improvement of Highways

Section 96(6)

'No tree, shrub... allowed to remain in such a situation as to hinder the reasonable use of the highway by any person entitled to use it, or so as to be a nuisance or injurious to the owner or occupier of premises adjacent to the highway.'

Part IX: Lawful and Unlawful Interference with Highways and Streets

Section 154(1)

'Where a hedge, tree or shrub overhangs a highway or any other road or footpath to which the public has access so as to endanger or obstruct the passage of vehicles or pedestrians, or obstructs or interferes with the view of drivers or vehicles or the light from a public lamp, a competent authority may, by notice either to the owner of the hedge, tree or shrub or to the occupier of the land on which it is growing, require him within 14 days from the date of service of the notice so to lop or cut it as to remove the cause of the danger, obstruction or interference.'

For the purposes of this section the following are competent authorities...

...in relation to a road or footpath that is not a highway, the local authority in whose area the road or footpath is situated.'

Section 154(2)

'Where it appears to a competent authority for any highway, or for any other road or footpath to which the public has access.'

a) That any hedge, tree, or shrub is dead, diseased, damaged or insecurely rooted, and;

b) That by reason of its condition it, or part of it, is likely to cause danger by falling on the highway, road or footpath, the authority may, by notice either to the owner of the hedge, tree, or shrub or to the occupier of the land on which it is situated, require him within 14 days from the date of service of the notice so to cut or fell it as to remove the likelihood of danger.'

Aspects of Law Influencing Tree Inspections

COMMON LAW

This is based on actual case law i.e., decisions made by judges over a number of years. Judges trying a similar case will usually abide by the decision or outcomes of the earlier case. New common law is constantly being made.

Cases of Importance:

"CAMINER & ANOTHER V NORTHERN & LONDON INVESTMENT TRUST LTD. 1949"

"If a tree or part of a tree falls onto adjoining land or onto the highway and consequently causes damage or injury to property or to an individual, the owner of the tree will be liable only if it can be established that he has been negligent."

"KENT V MARQUIS OF BRISTOL 1940"

"If it can be shown that the owner of a tree knew or ought to have known that the tree was dangerous and that he took no steps to deal with it, he will be guilty of negligence and therefore liable for any damage or injury which may result.

Note: negligence may be described as omitting to do what a prudent or reasonable person would do, or doing what a prudent or reasonable person would not do,

WILLIAMS V DEVON COUNTY COUNCIL 1966

This refers to the removal of a tree which had fallen onto the highway.

"If it can be shown that an owner took reasonable care to see that the tree did not cause an obstruction, the cost of removing it cannot be recovered from him. In this case, it was shown that the tree was sound and had been regularly inspected, and that this constituted reasonable care."

BROWN V HARRISON 1947

"As the plaintive was passing along a road, a horse chestnut, which was standing some 18ft from the highway, fell on him. It was an old tree, the top branches of which were dead, and although there was a high wind blowing at the time it could not be considered exceptional. The defendants were held to be liable as the condition of the tree was such that it was evident that it was dangerous."

CUNLIFFE V BANKS 1945

"An elm about 50 years old, which was subsequently found to be suffering from honey fungus, fell across a public road. The plaintiff's husband, riding a motor cycle, collided with the tree and later died of his injuries. It was shown that the defendant had taken all reasonable steps to discover what the condition of the tree was and that it could not have been known that it was likely to fall."

A person is not liable for nuisance constituted by the condition of his property unless he causes it, or by neglect of some duty allows it to occur, or, if it should arise without his own act or default, he fails to remedy it within a reasonable time after he had become, or ought to have become aware of it.

KENT V MARQUIS OF BRISTOL

An elm blew down during a strong wind and fell on a passing milk van, killing the driver, on inspection a hole was found in the tree 4in x 8in and 12in to 15in deep it was held that the tree had been inspected the hole would

have been seen and it would have indicated the probable existence of decay. Apparently the tree was hot inspected and no action had been taken to deal with the matter. The plaintiff was awarded substantial damages.

STATUTE LAW

SECTION 154

Where it appears to any competent authority for any highway or for any other road or footpath to which the public has access that any tree, shrub or hedge is dead, diseased, damaged or insecurely rooted and that by reason of its condition it, or part of it, is likely to cause danger by falling on the Highway, road, or footpath, the authority may by notice require the owner to cut or fell the tree within 14 days.

LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT 1976

Where a council considers that a tree on private land is in imminent danger of causing damage it may take steps to make the tree safe at the expense of the owner or occupier.

OCCUPIERS LIABILITY ACT 1967

A landowner has a duty to visitors to take such care as is reasonable to see that the visitor is reasonably safe in using the premises for the purpose for which they were invited or permitted to be there.

Appendix 6 – References

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