PP-11591117

Surrey Heath Borough Council
Surrey Heath House, Knoll Road, Camberley, Surrey GU15 3HD

Telephone: 01276 707100
Website: www.surreyheath.gov.uk
Email: development.control@surreyheath.gov.uk

Application for Tree Works: Works to Trees Subject to a Tree Preservation Order (TPO) and/or Notification of Proposed Works to Trees in a Conservation Area

Town and Country Planning Act 1990 (as amended)

Publication of applications on planning authority websites

Please note that the information provided on this application form and in supporting documents may be published on the Authority's website. If you require any further clarification, please contact the Authority's planning department.

Tree Location

Please provide the address of the site where the tree(s) stands (full address if possible)

Number: 54

Suffix:

Property Name:

Address Line 1: Church Road

Address Line 2:

Address Line 3: Surrey

Town/city: Bagshot

Postcode: GU19 5EQ

Easting (x): 490749

Northing (y): 163175

If the location is unclear or there is not a full postal address, describe as clearly as possible where it is

(for example, 'Land to rear of 12 to 18 High Street' or 'Woodland adjoining Elm Road')

Applicant Details

Name/Company

Title

Mr

First name

Buzz

Surname

Hornett

Company Name

Address

Address line 1

54 Church Road

Address line 2

Address line 3

Surrey

Town/City

Bagshot

Country

Postcode

GU19 5EQ

Are you an agent acting on behalf of the applicant?

- [x] Yes
- [ ] No

Contact Details

Primary number

Secondary number

Fax number

Email address

Agent Details

Name/Company

Title

Mr

First name

Steve

Surname

Wood

Company Name

SMW (Tree) Consultancy Ltd

Address

Address line 1

3 Orchard Close

Address line 2

Blackwater

Address line 3

Town/City

Camberley

Country

United Kingdom

Postcode

GU17 9EX

Contact Details

Primary number

***** REDACTED ******

Secondary number

Fax number

Email address

***** REDACTED ******

What Are You Applying For?

Based on the type of work proposed and the location and protected status of the trees involved, there are various details and supporting information that will need to be supplied in order for the Local Planning Authority to determine the application.

Are you seeking consent for works to tree(s) subject to a Tree Preservation Order?

◯ Yes
⊘ No

Are you wishing to carry out works to tree(s) in a conservation area?

⊘ Yes
◯ No

Documents and plans (for any tree)

A sketch plan clearly showing the position of trees listed in the question 'Identification of Tree(s) and Description of Works' MUST be provided when applying for works to trees covered by a Tree Preservation Order.

A sketch plan is also advised when notifying the LPA of works to trees in a conservation area (see guidance notes).

It would also be helpful if you provided details of any advice given on site by an LPA officer.

Are you providing additional information in support of your application (e.g. an additional schedule of work for the question 'Identification of Tree(s) and Description of Works')?

⊘ Yes
◯ No

If Yes, please provide the reference numbers of plans, documents, professional reports, photographs etc in support of your application

"54 Church Road Beech Tree Report Final report V3"
"54 Church Rd Plotted Tree 2022"
"54 Church Road photo documentation"

Identification of Tree(s) and Description of Works

Please identify the tree(s) and provide a full and clear specification of the works you want to carry out

Fell to ground level

You might find it useful to contact an arborist (tree surgeon) for help with defining appropriate work.

Where trees are protected by a Tree Preservation Order, please number them as shown in the First Schedule to the Tree Preservation Order where this is available. You should use the same numbering on your sketch plan (see below for sketch plan requirements).

Please provide the following information:

- Tree species
- The number used on the sketch plan; and
- A description of the proposed works.

Where trees are protected by a Tree Preservation Order you must also provide:

- Reasons for the work; and where trees are being felled
- Proposals for planting replacement trees (including quantity, species, position and size) or reasons for not wanting to replant.

e.g. Oak (T3) - fell because of excessive shading and low amenity value. Replant with one standard ash in same position.

Sketch plan requirements

Your plan needs to show the precise location of the tree(s) in relation to nearby property/roads/boundaries. It should, therefore:

- indicate the main features of the site where the tree(s) stand and its surroundings; in particular, you should:
  - mark and name surrounding roads
  - sketch in buildings, including adjoining properties
  - add house numbers or names
- mark the position of the tree(s) to which you want to carry out work and identify them by the number shown in the Tree Preservation Order where possible; if you use a different number, please make sure that this can be matched with your description of the tree(s)
- if there are many trees on the site, make clear which tree(s) are included in this application by:
  - marking all trees on the plan, but only numbering those to which you want to carry out work
  - showing the approximate distance between the application tree(s) and buildings
  - adding other relevant features on the site (e.g. greenhouse, paths)

If it is impossible to identify the tree(s) accurately on the plan (e.g. because they are part of a woodland or group of trees), please identify their approximate location on the plan and provide details of how the tree(s) are marked on site (e.g. high visibility tape, tree tags, paint, etc); trees must not be marked by scarring or cutting into the bark.

Tree Ownership

Is the applicant the owner of the tree(s)?

- [x] Yes
- [ ] No

Authority Employee/Member

With respect to the Authority, is the applicant and/or agent one of the following:
(a) a member of staff
(b) an elected member
(c) related to a member of staff
(d) related to an elected member

It is an important principle of decision-making that the process is open and transparent.

For the purposes of this question, "related to" means related, by birth or otherwise, closely enough that a fair-minded and informed observer, having considered the facts, would conclude that there was bias on the part of the decision-maker in the Local Planning Authority.

Do any of the above statements apply?

- [ ] Yes
- [x] No

Declaration

I / We hereby apply for Tree works: Trees in conservation areas/subject to TPOs as described in this form and accompanying plans/drawings and additional information. I / We confirm that, to the best of my/our knowledge, any facts stated are true and accurate and any opinions given are the genuine options of the persons giving them. I / We also accept that: Once submitted, this information will be transmitted to the Local Planning Authority and, once validated by them, be made available as part of a public register and on the authority's website; our system will automatically generate and send you emails in regard to the submission of this application.

- [x] I / We agree to the outlined declaration

Signed

Steve Wood

Date

03/10/2022

Team: Planning Services
Our Ref: TCA/22/0032
Direct Tel: 01276707100
Email: trees@surreyheath.gov.uk

Surrey Heath Borough Council
Surrey Heath House, Knoll Road,
Camberley, Surrey, GU15 3HD
Web: www.surreyheath.gov.uk

Mr Steve Wood
SMW (Tree) Consultancy Ltd
3 Orchard Close
Blackwater
Camberley
GU17 9EX
United Kingdom

14 November 2022

Dear Mr Wood

Case reference: TCA/22/0032

Site Address: 54 Church Road Bagshot Surrey GU19 5EQ

I refer to your recent notice in accordance with Section 211 of the Town & Country Planning Act giving details of proposed work to trees at the above address which are growing within a Conservation Area.

Having considered your proposals, the Authority's decision is as follows:

THE LOCAL AUTHORITY RAISES AN OBJECTION TO THE FOLLOWING WORKS AND HAS SERVED A TREE PRESERVATION ORDER.

T1 – Beech. Fell to ground level.

The Local authority deems it expedient to serve a Preservation Order (TPO), to safeguard the visually prominent veteran tree within the curtilage of the property. The tree benefited from protection from the Bagshot Church Road Conservation Area. The Beech is one of significant age and size. The TPO has been served following the submission of a Section 211 notification for the felling of this tree, to which the Council objects as the removal of this tree would harm the character and appearance of the landscape scene. The evidence provided within the notice is not considered sufficient to justify the felling of this principal landscape feature but will consider any future TPO application submission supported with a sufficient level of detail to allow the LPA to make an accurate assessment of the condition of the tree.

REASON:

To preserve a significant veteran tree which provides a very high level of public amenity.

Yours sincerely

G.Chinniah

Gavin Chinniah
Head of Planning

29th September 2022

Dear Mr Hornett,

Further to our recent site visit on Friday 23rd September 2022, please find detailed below our tree report as requested.

Site Address: Beech House, 54 Church Road, Bagshot, Surrey, GU19 5EQ

Location: Rear Garden adjacent to the boundary fence to Church Road.

FINAL REPORT

We were instructed to conduct ground level visual health and safety tree survey on the very large Beech tree (Fagus sylvatica) at the above property. The inspection was conducted mainly at ground level and at the main stem bifurcation at approximately 2.7m above ground level.

Brief.

The homeowner has commissioned various inspections of this tree, the earliest in July 2017, the second as a direct request from the Highways inspector at Surrey County Council December 2020, who noted concern over the tree's safety. The latest on 18th March 2020 by Kim Gifford who conducted a Picus tomograph at 1m above ground level and Resistograph tests on (as identified in our report as number 1) at 4m above ground level. The report was submitted to SHBC with the recommendations to reduce the overall crowns dimensions. This was approved and the works completed in April/May 2021.

The homeowner Mr Hornett contacted us with further concerns over the tree's safety to ensure due diligence of the responsibility as the tree's owner. We responded with advice on how we would conduct a re inspection which was approved.

Tree Information.

Height 24.6m Stem DBH @1m 2345mm Crown Spread N. 7.5m, E. 8.5m, S. 8.5m, W. 9.5m. Distance to the house,8.0m. Average crown height 8-10m.

To the west approximately 17m is a large natural lake of considerable size, this is encompassed in extensive ground and numerous other trees. To the east is Church Road where there is a level alteration from the trees base to the road of approximately 1.6m.

The sizeable main stem bifurcates at 2.7m in to a five stemmed structure and compact crown with good healthy leaf coverage. Each of the subsequent stems has diameter of 420/550mm. Most of the stem bifurcations are of a weak included bark formation and leading to further depressions of the main stem.

We conducted our investigation on Friday 23rd September between 10.30 and 1.30 with good dry weather conditions and a partially sunny, with reasonable light level. Equipment used was a 40cm long micro auger and a sound hammer. We did contact Simon Homes of Tree Surveys to conduct a Picus test as previously performed by Kim Gifford, but in his professional opinion with the physical restrictions around the basal area and natural formation/deformities of the stem the results would not be accurate and likely to result in insufficient information to make an accurate assessment. He is one of the leading authorities in this field. Thus, we fully respect this decision not to proceed with these tests.

Comments.

Information from the SHBC website indicates the site in located within the Church Road Conservation Area, No Tree Preservation Orders appear to be in place.

We conducted numerous sound hammer tests up to a height of 1.8m,and several tests bore holes at various points around the stem basal area where the sound hammer test indicated there may be some tissue anomalies, concentrating where there are fungal fruiting brackets. These we identified as Ganoderma applanatum (Artists Fungus) This well documented fungi causes decay in the lower stem and roots system and with the nature of beech wood tissues, it progresses (in tree terms) quite quickly with very little tissue composition to restrict the advancement of the decay. There are no control methods available to restrict or abate this fungal attack.

Consequently, it progresses to a point where the trees safety is compromised. The fungi produce annual rings of growth similar to trees and thus relatively easy to establish how long the fruiting brackets have been present, and a guide how long the decay has been affecting the tree.

At the stem bifurcation on all the stems there are a number of old pruning wounds/cavities, all with extensive decay and fungal brackets. The largest cavity on the south side at 3m of 550mm wide and 370mm tall and an ingress into the stem of 330mm. The wound is showing signs of occlusion with callus growth of 60/80mm and soft decaying woody tissues in the wound area. On the large stem (number 5) on Church Roadside at approximately 4m above road level, is a wound of similar character but slightly smaller and attached a large, still active, fungal bracket of Ganoderma applanatum this is a multi-layer bracket with a width of 250mm depth 220mm and a height of 25/300mm, indicating it has been present for several years.

Our assessment is that the largest bracket, located on the northeast side of the main stem measuring 350mm wide and 210mm tall is approximately 7 years old and still active in that it is removing nutrients from the wood resulting in decay. There is a smaller active fungal bracket just above measuring 100mm wide and 40mm tall. On the north side another bracket 600mm above the base measuring 150mm wide and 100mm tall. West side 200mm above the base measuring 100mm wide and 80mm tall. Northeast 170mm above the base measuring 95mm wide and 100mm tall. All these are active fungal brackets of the same species. On the stem at various points up to a height of 1m are a number of old brackets.

There is exudation staining on the main stem of a brown colouration possibly indicating the internal decay breaching the stem cell wall.

From our assessments we were initially guided that the basal and lower stem was of an acceptable structure, and that the decay may have progressed slightly from the previous test, but unlikely of a level where the stems structure was further compromised.

To ensure we conducted a thorough inspection, we accessed the main stem bifurcation area and continued with the sound hammer test on all five stems. At the bifurcation of stem 1 (towards the house) was a small Ganoderma fungal bracket and the hammer test conducted up to 1m above this point, this revealed a notable hollow sound. Similar testing the remaining stems an almost identical result was obtained in stem 5 (over Church Rd).

Using this information, an auger was drilled into the stems 1 & 5 at 100/150mm above the bifurcation, this being the point of greatest weakness. The auger only penetrated into the stem by 75mm revealing stained shavings, then without any resistance, the auger penetrated further into the stem to a depth of 380mm. Each stem has a diameter of 420 & 490mm. This indicated that each stem has an excessive amount of decay and a significant weakening of the stem's stability.

Recommendations.

We acknowledge that the tree has quite recently been crown reduced and shortening of lateral branches to re shape it into a more acceptable habit. This will have lowered the loading on the structural weakness at various points detailed in this report and as part of the previous inspection reports recommendations.

However, the information resulting for the Picus test at 1m above ground level did indicate a cross section from northwest to southeast of consistent and significant decay with little supportive wood tissues remaining. We do appreciate that testing below this point may be difficult and possibly not done due the previously commented natural structural deformities.

From the knowledge gained in the profession of this fungi, the more probable decay would be below this point and the root buttresses. Had it been possible to conduct the test just above ground level we are confident that a much greater level of decay would be present.

Whilst this information may be sufficient to consider a significant reduction of the crown, albeit, resulting in an aesthetically unpleasing habit. The subsequent tests we conducted in the two stems (1&5) revealing extensive and critical levels of decay.

In our opinion there are no remedial actions available to lower the loading at their bifurcation to any perceivable level of safety. The only option is to remove them completely.

This would leave the three remaining stems with their included bark formation in an equally unstable situation, where a failure would be highly probable with a significant and unacceptable threat to the homeowner and members of the public and parked vehicles.

There has been considerable research relating to what is an acceptable amount of sound and supportive wood tissues necessary to allow the retention of stems structures, normally explained as the ratio of stem to wall thickness. What must be considered as a priority in this tree's assessment is the number of hazard conditions it has an effect on. Beech House, The highway, and pedestrians all of which are high profile considerations.

We have debated on many options of remedial action to try to retain this tree, but with the collated evidence, the only professional conclusion is that the tree must be removed.

As the tree is within the Conservation Area of church Road an application to Surrey Heath Borough Council will be necessary to seek approval for the reports recommendations to which this report should be included.

We hope this report meets with your approval. If any further information is required, please do not hesitate to contact us.

Yours faithfully

For and on behalf of

[redacted]

SMW (Tree) Consultancy Ltd
O.N.D. ARB. M.Arbor.A A

Age Classification

1/ YOUNG:	Under 5 years old.
2/ SEMI MATURE:	Between 5 and 15 years old.
3/ EARLY MATURE;	within one third of life expectancy.
4/ MATURE:	Between second and third stages of life expectancy.
5/ OVER MATURE:	Tree in good health but may have signs of early deterioration but not affecting structural integrity.
6/ VETERAN:	Tree of significant aesthetic and historic value, may require frequent monitoring.

Height Classification

1/ SMALL:	Under 5m.
2/ MEDIUM:	Between 5 and 10m.
3/ LARGE:	Between 15 and 25m.
4/ EXTRA LARGE:	Over 25m.

GLOSSARY OF ARBORICULTURAL TERMS

Abscission. The shedding of a leaf or other short-lived part of a woody plant, involving the formation of a corky layer across its base; in some tree species twigs can be shed in this way

Abiotic. Pertaining to non-living agents, e.g., environmental factors

Absorptive roots. Non-woody, short-lived roots, generally having a diameter of less than one millimetre, the primary function of which is uptake of water and nutrients

Adaptive growth. In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium this helps to maintain a uniform distribution of mechanical stress

Adaptive roots. The adaptive growth of existing roots; or the production of new roots in response to damage, decay or altered mechanical loading

Adventitious shoots. Shoots that develop other than from apical, axillary, or dormant buds; see also 'epicormic'

Anchorage. The system whereby a tree is fixed within the soil, involving cohesion between roots and soil and the development of a branched system of roots which withstands wind and gravitational forces transmitted from the aerial parts of the tree

Architecture. In a tree, a term describing the pattern of branching of the crown or root system

Axil. The place where a bud is borne between a leaf and its parent shoot

Bacteria. Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms

Bark. A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex, and periderm; occasionally applied only to the periderm or the phellem

Basidiomycotina (Basidiomycetes). One of the major taxonomic groups of fungi; their spores are borne on microscopic peg-like structures (basidia), which in many types are in turn borne on or within conspicuous fruit bodies, such as brackets or toadstools. Most of the principal decay fungi in standing trees are basidiomycetes

Bolling. A term sometimes used to describe pollard heads

Bottle-butt. A broadening of the stem base and buttresses of a tree, in excess of normal and sometimes denoting a growth response to weakening in that region, especially due to decay involving selective delignification

Bracing. The use of rods or cables to restrain the movement between parts of a tree

Branch:

- **Primary.** A first order branch arising from a stem
- **Lateral.** A second order branch, subordinate to a primary branch or stem and bearing sub-lateral branches
- **Sub-lateral.** A third order branch, subordinate to a lateral or primary branch, or stem and usually bearing only twigs

Branch bark ridge. The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem

Branch collar. A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base

Brown-rot. A type of wood decay in which cellulose is degraded, while lignin is only modified

Buckling. An irreversible deformation of a structure subjected to a bending load

Buttress zone. The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions

Cambium. Layer of dividing cells producing xylem (woody) tissue internally and phloem (bark) tissue externally

Canker. A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria

Canopy species. Tree species that mature to form a closed woodland canopy

Cleaning out. The removal of dead, crossing, weak, and damaged branches, where this will not damage or spoil the overall appearance of the tree

Compartmentalization. The confinement of disease, decay, or other dysfunction within an anatomically discrete region of plant tissue, due to passive and/or active defences operating at the boundaries of the affected region

Compression strength. The ability of a material or structure to resist failure when subjected to compressive loading, measurable in trees with special drilling devices

Compressive loading. Mechanical loading which exerts a positive pressure, the opposite to tensile loading

Condition. An indication of the physiological vitality of the tree. Where the term 'condition' is used in a report, it should not be taken as an indication of the stability of the tree

Construction exclusion zone. Area based on the Root Protection Area (in square metres) to be protected during development, by the use of barriers and/or ground protection

Crown/Canopy. The main foliage bearing section of the tree

Crown lifting. The removal of limbs and small branches to a specified height above ground level

Crown thinning. The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure

Crown reduction/shaping. A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape

Crown reduction/thinning. Reduction of the canopy volume by thinning to remove dominant branches whilst preserving, as far as possible the natural tree shape

Deadwood. Dead branch wood

Decurrent. In trees, a system of branching in which there is a well-defined central main stem, bearing branches which are limited in their length, diameter, and secondary branching (cf. excurrent) In fungi with toadstools as fruit bodies, the description of gills which run some distance down the stem, rather than terminating abruptly

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

Delamination. The separation of wood layers along their length, visible as longitudinal splitting

Dieback. The death of parts of a woody plant, starting at shoot-tips or root-tips

Disease. A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms

Distal. In the direction away from the main body of a tree or subject organism (cf. proximal)

Dominance. In trees, the tendency for a leading shoot to grow faster or more vigorously than the lateral shoots; also, the tendency of a tree to maintain a taller crown than its neighbours

Dormant bud. An axial bud which does not develop into a shoot until after the formation of two or more annual wood increments; many such buds persist through the life of a tree and develop only if stimulated to do so

Dysfunction. In woody tissues, the loss of physiological function, especially water conduction, in sapwood

DBH (Diameter at Breast Height). Stem diameter measured at a height of 1.5 metres (UK) or the nearest measurable point. Where measurement at a height of 1.5 metres is not possible, another height may be specified

Deadwood. Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard

Endophytes. Micro-organisms which live inside plant tissues without causing overt disease, but in some cases capable of causing disease if the tissues become physiologically stressed, for example by lack of moisture

Epicormic shoot. A shoot having developed from a dormant or adventitious bud and not having developed from a first-year shoot

Excrescence. Any abnormal outgrowth on the surface of tree or other organism

Excurrent. In trees, a system of branching in which the crown is borne on a number of major widely spreading and secondarily branched limbs (cf. excurrent)

Felling licence. In the UK, a permit to fell trees in excess of a stipulated number of stems or volume of timber

Flush-cut. A pruning cut which removes part of the branch bark ridge and or branch-collar

Girdling root. A root which circles and constricts the stem or roots possibly causing death of phloem and/or cambial tissue

Guying a form of artificial support with cables for trees with a temporarily inadequate anchorage

Habit. The overall growth characteristics, shape of the tree and branch structure

Hazard beam. An upwardly curved part of a tree in which strong internal stresses may occur without being reduced by adaptive growth, prone to longitudinal splitting

Heartwood/false heartwood/ripewood. Sapwood that has become dysfunctional as part of the natural aging processes

Heave. A term mainly applicable to a shrinkable clay soil which expands due to re-wetting after the felling of a tree which was previously extracting moisture from the deeper layers; also, the lifting of pavements and other structures by root diameter expansion; also, the lifting of one side of a wind-rocked root-plate

High canopy tree species. Tree species having potential to contribute to the closed canopy of a mature woodland or forest

Incipient failure. In wood tissues, a mechanical failure which results only in deformation or cracking, and not in the fall or detachment of the affected part

Included bark (ingrown bark). Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact

Increment borer. A hollow auger, which can be used for the extraction of wood cores for counting or measuring wood increments or for inspecting the condition of the wood

Infection. The establishment of a parasitic micro-organism in the tissues of a tree or other organism

Internode. The part of a stem between two nodes; not to be confused with a length of stem which bear nodes but no branches

Lever arm. A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch

Lignin. The hard, cement-like constituent of wood cells; deposition of lignin within the matrix of cellulose microfibrils in the cell wall is termed Lignification

Lions tailing. A term applied to a branch of a tree that has few if any side-branches except at its end, and is thus liable to snap due to end-loading

Loading. A mechanical term describing the force acting on a structure from a particular source, e.g., the weight of the structure itself or wind pressure

Longitudinal. Along the length (of a stem, root, or branch)

Lopping. A term often used to describe the removal of large branches from a tree, but also used to describe other forms of cutting

Mature Heights (approximate)**:**

- **Low maturing** – less than 8 metres high
- **Moderately high maturing** – 8 – 12 metres high
- **High maturing** – greater than 12 metres high

Microdrill. An electronic rotating steel probe, which when inserted into woody tissue provides a measure of tissue density

Minor deadwood. Deadwood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree

Mulch. Material laid down over the rooting area of a tree or other plant to help conserve moisture; mulch may consist of organic matter or a sheet of plastic or other artificial material

Mycelium. The body of a fungus, consisting of branched filaments (hyphae)

Occluding tissues. A general term for the roll of wood, cambium and bark that forms around a wound on a woody plant (cf. woundwood)

Occlusion. The process whereby a wound is progressively closed by the formation of new wood and bark around it

Pathogen. A micro-organism which causes disease in another organism

Photosynthesis. The process whereby plants use light energy to split hydrogen from water molecules and combine it with carbon dioxide to form the molecular building blocks for synthesizing carbohydrates and other biochemical products.

Phytotoxic. Toxic to plants

Pollarding. The removal of the tree canopy, back to the stem or primary branches. Pollarding may involve the removal of the entire canopy in one operation or may be phased over several years. The period of safe retention of trees having been pollarded varies with species and individuals. It is usually necessary to re-pollard on a regular basis, annually in the case of some species.

Primary branch. A major branch, generally having a basal diameter greater than 0.25 x stem diameter

Primary root zone. The soil volume most likely to contain roots that is critical to the health and stability of the tree and normally defined by reference to Table 1 of BS5837 (1991) Guide for Trees in Relation to Construction.

Priority. Works may be prioritised, 1. = high, 5. = low

Probability. A statistical measure of the likelihood that a particular event might occur

Proximal. In the direction towards from the main body of a tree or other living organism (cf. distal)

Pruning. The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs

Radial. In the plane or direction of the radius of a circular object such as a tree stem

Rams-horn. In connection with wounds on trees, a roll of occluding tissues which has a spiral structure as seen in cross-section

Rays. Strips of radially elongated parenchyma cells within wood and bark. The functions of rays include food storage, radial translocation and contributing to the strength of wood

Red rot. A form of decay in which reddish pigments are present but which is biochemically a white-rot; not to be confused with brown-rots which sometimes also have a reddish-brown colour

Reactive Growth/Reaction Wood. Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth)

Removal of dead wood. Unless otherwise specified, this refers to the removal of all accessible dead, dying and diseased branchwood and broken snags

Removal of major dead wood. The removal of, dead, dying, and diseased branchwood above a specified size

Respacing. Selective removal of trees from a group or woodland to provide space and resources for the development of retained trees.

Residual wall. The wall of non-decayed wood remaining following decay of internal stem, branch, or root tissues

Root-collar. The transitional area between the stem/s and roots

Root-collar examination. Excavation of surfacing and soils around the root-collar to assess the structural integrity of roots and/or stem

Root protection area. An area of ground surrounding a tree that contains sufficient rooting volume to ensure the tree's survival. Calculated with reference to Table 2 of BS5837 (2005) and shown in plan form in square metres

Root zone. Area of soils containing absorptive roots of the tree/s described

microscopic and dispersed in air or water. The **Primary** root zone is that which we consider of primary importance to the physiological well-being of the tree

Sapwood. Living xylem tissues

Secondary branch. A branch, generally having a basal diameter of less than 0.25 x stem diameter

Selective delignification. A kind of wood decay (white rot) in which lignin is degraded faster than cellulose

Shedding. In woody plants, the normal abscission, rotting off or sloughing of leaves, floral parts, twigs, fine roots, and bark scales

Silvicultural thinning. Removal of selected trees to favour the development of retained specimens to achieve a management objective

Simultaneous white-rot. A kind of wood decay in which lignin and cellulose are degraded at about the same rate

Snag. In woody plants, a portion of a cut or broken stem, branch or root which extends beyond any growing-point or dormant bud; a snag usually tends to die back to the nearest growing point

Soft rot. A kind of wood decay in which a fungus degrades cellulose within the cell walls, without any general degradation of the wall as a whole

Spores. Propagules of fungi and many other life-forms; most spores are **Shrub species.** Woody perennial species forming the lowest level of woody plants in a woodland and not normally considered to be trees

Sporophore. The spore bearing structure of fungi

Sprouts. Adventitious shoot growth erupting from beneath the bark

Stem/s. The main supporting structure/s, from ground level up to the first major division into branches

Stress. In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition, or extremes of temperature

Stress. In mechanics, the application of a force to an object

Stringy white rot. The kind of wood decay produced by selective delignification

Storm. A layer of tissue which supports the fruit bodies of some types of fungi, mainly ascomycetes

Structural roots. Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree

Subsidence. In relation to soil or structures resting in or on soil, a sinking due to shrinkage when certain types of clay soil dry out, sometimes due to extraction of moisture by tree roots

Subsidence. In relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight

Taper. In stems and branches, the degree of change in girth along a given length

Target canker. A kind of perennial canker, containing concentric rings of dead occluding tissues

Targets. In tree risk assessment (with slight misuse of normal meaning) persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it

Topping. In arboriculture, the removal of the crown of a tree, or of a major proportion of it

Torsional stress. Mechanical stress applied by a twisting force

Translocation. In plant physiology, the movement of water and dissolved materials through the body of the plant

Transpiration. The evaporation of moisture from the surface of a plant, especially via the stomata of leaves; it exerts a suction which draws water up from the roots and through the intervening xylem cells

Understorey. A layer of vegetation beneath the main canopy of woodland or forest or plants forming this

Understorey tree species. Tree species not having potential to attain a size at which they can contribute to the closed high canopy of a woodland

Vascular wilt. A type of plant disease in which water-conducting cells become dysfunctional

Vessels. Water-conducting cells in plants, usually wide and long for hydraulic efficiency; generally, not present in coniferous trees

Veteran tree. A loosely defined term for an old specimen that is of interest biologically, culturally, or aesthetically because of its age, size, or condition and which has usually lived longer than the typical upper age range for the species concerned

White rot. A range of kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded

Wind exposure. The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity

Wind pressure. The force exerted by a wind on a particular object

Windthrow. The blowing over of a tree at its roots

Wound dressing. A general term for sealants and other materials used to cover wounds in the hope of protecting them against desiccation and infection, only of proven value against fresh wound parasites

Woundwood. Wood with atypical anatomical features, formed in the vicinity of a wound'