

# Tree Surgery Terminology

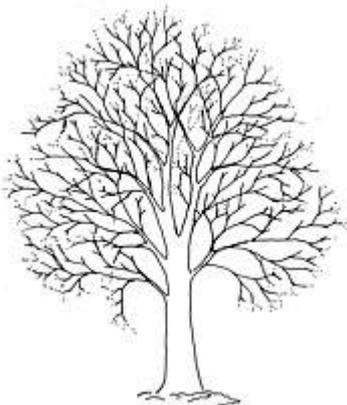
## What's in a word?

It is important that the basic terms commonly used to describe tree work operations are understood.

The four main pruning options are shown below and after that a glossary of other terms that you may find helpful. These are very general summaries and the Arboricultural Association can provide more detailed guidance by leaflets and other publications.

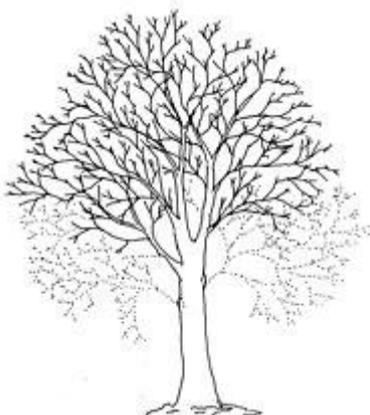
The British Standards most relevant to arboricultural work are BS3998:2010 recommendations for tree work and BS5837 trees in relation to construction.

## Section 1: Main Pruning Definitions



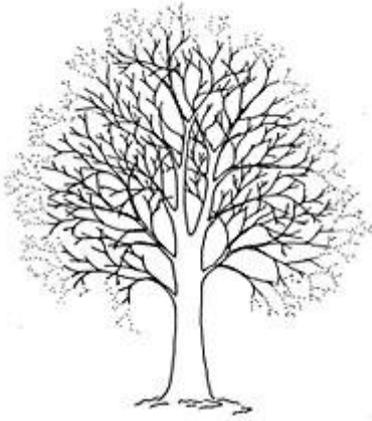
### 1. Crown Thin

Crown thinning is the removal of a small portion of secondary and small live branches to produce a uniform density of foliage around an evenly spaced branch structure. It is usually confined to broad-leaves species. Crown thinning includes crown cleaning and does not alter the overall size or shape of the tree. Common reasons for crown thinning are to allow more light to pass through the tree, reduce wind resistance or to lessen the weight of heavy branches.



### 2. Crown Lift (or Crown Raise)

Crown lifting is the removal of the lowest branches and preparing of lower branches for future removal. Good practice dictates crown lifting should not normally include the removal of large branches growing directly from the trunk as this causes large wounds which may jeopardise the long term future of the tree. Common reasons for crown lifting are to bring more light and give access for traffic. In the UK common practice dictates clearance for vehicles is 5.2 metres (17 feet), and for pedestrians 2.5 m (8 feet).



### **3. Crown Reduction**

Crown reduction is used to reduce the height and/or spread of the crown of a tree by the removal of the ends of branches whilst maintaining the tree's natural shape as far as practicable.

*Illustrations courtesy of European Arboricultural Council.*

### **4. Crown Clean**

The removal of dead, dying, diseased, broken, crowded, weakly attached and low-vigour branches as well as climbing plants (e.g. ivy).

## **Section 2: Other useful terms associated with Tree Surgery**

### **Bracing**

Bracing is a term used to describe the strengthening or supporting of a tree by means of cables, rods, webbing or similar.

### **Branch bark ridge and collar**

More noticeable on some species than others the branch bark ridges are shown as hatched lines on Diagram 2. Also more noticeable on some species than others is the branch collar, a swelling at the base of the branch. Neither the branch bark ridge nor collar should be cut.

### **Callus**

Scar tissue laid down by the tree in order to cover and protect a wound, eg a pruning wound.

### **Cavity work**

Removal of material from cavities and drainage of cavities achieved by drilling through living wood. Modern research indicates this should not normally be carried out.

## **Co-dominant stems**

See forked growth.

## **Conservation Area**

The designation given to an area by a Local Planning Authority (LPA) which requires, amongst other things, six weeks advance notice to be given to the LPA prior to certain tree works. In other words, most works to most trees within a Conservation Area must not be undertaken without notifying the LPA in writing six weeks in advance. Failure to do so may be a criminal offence.

## **Coppicing**

The cutting down of a tree within 300 mm (12 in) of the ground at regular intervals (typically on a one to five year rotation). Traditionally applied to certain species such as Hazel and Sweet Chestnut to provide stakes etc.

## **Crown**

The section of the tree formed by its branches and usually starting above its stem.

## **Crown Lifting or Raising, Crown Reduction or Crown Thinning**

- see section 1.

## **Dead, Dying and Dangerous**

The phrase describing the conditions of trees to which protection afforded by Tree Preservation Orders or Conservation Areas does not apply. Legal definitions are the subject of much debate, often through the courts and professional advice is strongly recommended.

## **Decline**

When a tree exhibits signs of or lack of vigour and progressing towards its death.

## **Dieback**

Tips of branches exhibit no signs of life. As decline progresses so more branches are affected and to a greater extent.

## **Dormant**

The inactive condition of a tree, usually during the coldest months of the year when there is little or no growth and leaves of deciduous trees have been shed.

## **Drop Crotching**

Shortening branches by pruning off the end back to a lateral branch which is at least 1/3 diameter of the removed branch.

## **Epicormic Shoot/Growth**

An epicormic growth and respective shoots are shoots growing from an epicormic bud which lies underneath the bark of a trunk, stem, or branch of a tree. Epicormic buds lie dormant beneath the bark, their growth suppressed by hormones from active shoots higher up the tree.

## **Fertilising**

The application of a substance usually to the tree's rooting area (and occasionally to the tree) to promote tree growth or reverse or reduce decline.

## **Forked growth (Co-dominant stems)**

The development of two or more leading shoots of roughly equal size and vigour competing with each other for dominance.

## **Formative pruning**

Pruning during the early years of a tree's growth to establish the desired form and/or correct defects or weaknesses.

## **Fungi/Fruiting bodies**

Any spore-bearing structure on a stalk (like a toadstool) or attached directly to the tree (a 'bracket' fungus). Note: some are harmful (cause disease - pathogenic), some are harmless (living on material already dead - saprophytic) and some are beneficial (symbiotic).

## **Lifting or Raising**

See Section 1, Crown Lifting.

## **Pathogenic**

Disease inducing - usually referring to fungal fruiting bodies.

## **Pollard**

A frequently misunderstood term, and used in two different contexts. Traditionally and still commonly used this term describes the removal of all branches from the trunk. Mature trees that have not been pollarded before are generally not suitable candidates for pollarding due to the large wounds that such treatment produces which may jeopardise the long term future of the tree. A less frequently used definition can mean the regular (annual or biannual) pruning back of small branches to the same point resulting in the formation of a 'pollard head'. Pollarded trees usually require regular treatment of re-growth.

## **Reduction**

See Section 1 - Crown Reduction.

## **Root pruning**

The pruning back of root (similar to the pruning back of branches). This has the ability to affect tree stability so it is advisable to seek professional advice prior to attempting root pruning.

## **Thinning**

See Section 1, Crown Thinning.

## **Tree Preservation Order (TPO)**

Statutory protection applied to a tree or trees meaning that most works to most trees covered by a TPO must not be undertaken without the prior written consent of the local Authority (LA). Failure to do so may be a criminal offence.

# **Section 3: The importance of the pruning cut**

Every pruning cut inflicts a wound on the tree. The ability of a tree to withstand a wound and maintain healthy growth is greatly affected by the pruning cut - its angle and its position relative to the certain parts of the tree. As a general rule branches should be removed at their point of attachment or shortened to a lateral which is at 1/3 of the diameter of the removed branch

## Section 4: When to prune

As a general rule pruning should be avoided during the time of leaf/needle production (when the tree draws on its energy reserves) and at the time of leaf/needle fall (when the tree stores energy).

Outside these periods most trees can be pruned at any time of the year, with a few exceptions:

Cherry, Plum and related trees (*Prunus* species) should be pruned soon after flowering to reduce the risk of bacterial infection. Maple, Birch, Beech and Walnut should be pruned in leaf or just after leaf fall and Magnolia in high summer to avoid 'bleeding' (exuding sap), which although not considered damaging, can be unsightly.