

# GUIDE TO PRUNING PROTECTED TREES

This advice note is aimed at both tree owners and the arborists they contract to work on their trees. It applies to all tree work, but in particular it should guide work to **protected** trees that has been given specific approval by Breckland Council.

***Contractors ignoring this advice may be in breach of the Tree Preservation Order regulations.***

This advice supplements the Breckland Advice Note: 'Standard terms to describe tree work' and is intended to complement British Standard BS3998: Recommendations for Tree Work.

A systematic approach is more likely to achieve the desired outcomes.

## Step 1: Why do you wish to prune your tree?

**Pruning a tree is usually done for one or more of the following reasons**

1. To reduce an unacceptable risk of parts of, or the whole of, a tree falling and causing damage to people or property.
2. To encourage a young tree to develop a shape and structure that is sustainable in the long term in the location in which it is growing.
3. To reduce direct shading, or increase general sky light levels, where this takes reasonable priority over the free growth of the tree.
4. To facilitate access beneath a tree or beyond to a place that parts of the tree obscure.
5. To physically clear the fabric of a building, for instance to prevent branches rubbing on a roof.
6. To promote early veteranisation and increase biodiversity.

*NB. Utility pruning (line clearance) has very specific goals – it is the responsibility of the utility companies not the private householder and is not considered here.*

## Step 2: What is the aim of retaining a tree?

**Trees are given protection by your Local Planning Authority because of the amenity they provide for people living in or visiting Breckland district.**

It helps to realise what the most important amenity value of the tree is.

- Is the value primarily visual? In which case the *architectural* characteristics of the tree will be the most important and classic pruning techniques should be used.
- Or, is the primary importance of the tree to support wildlife? In which case "conservation cutting" techniques would be more appropriate.
- In a lot of cases the value will be a combination of visual and wildlife amenity.

## Step 3: Techniques to achieve your aims

### Formative pruning

- Formative pruning removes crossing limbs; suppresses secondary leaders; singles paired leaders from unions with included bark and lifts the crown (if required) towards its final desired height above the ground.

### Crown reduction

- Leaders and lateral branches being removed should be pruned back to a side branch which has a diameter not less than 30% of the diameter of the part being removed.
- If it is absolutely not possible to follow this rule, for instance where a crown which is dying back is to be cut back to live wood for safety or to promote new growth, a tapered 'conservation cut' should be preferred to creating a blunt stub end.
- When carrying out an overall crown reduction, the most attractive shape can usually be achieved by removing rising lateral branches and retaining dropping branches.
- Species showing strong apical dominance such as silver birch (and most conifers) should not be 'topped'. Some reduction in height may be possible by cutting back to a strongly ascending secondary branch while keeping strictly to the 30% rule.

### Crown thinning

- The given aim of crown thinning is usually to reduce the windage on a tree in order to improve the safety factor or to allow a proportion of light through the crown.
- However, with species such as lime, sycamore and horse chestnut this will only be a very temporary condition as sprouting will be so vigorous as to make it not really worth doing. In general crown thinning is to be discouraged as it can disproportionately remove foliage that is the energy gathering part of the tree, without significantly reducing the amount of structural timber on which the tree has an annual obligation to expend energy through incremental growth.
- Excessive crown thinning can stress a tree. For this reason crown reduction which removes a balanced proportion of leaves and timber is to be preferred.

### Crown lifting

- Crown lifting of young trees should be achieved by removal of whole limbs at their junction with the main stem using classic 'target pruning' cuts.
- Crown lifting of mature trees can be more difficult. The lowest (second order) branches of large mature trees are often the largest and removing one can make an unacceptably large wound from which resultant decay might weaken the main stem. The desired clearance height should be achieved by removal of third order branches, applying the same principles as any other crown reduction. Creating a 'browse line' by cutting just as high as you can reach from the ground should be avoided.
- If a large low limb absolutely has to be removed, then cutting a metre or more out from the main stem using conservation cutting techniques will retain a stronger

engineering solution than a 'target cut' and allow the tree to adjust gradually as the short length decays. Observation of natural failures will demonstrate this principal.

### **Cleaning out**

- The removal of dead, dying and damaged limbs, crossing limbs and foreign bodies is usually carried out for reasons of risk reduction and visual amenity. However, always be aware that complete removal of deadwood will significantly reduce the biodiversity value of the tree.

### **Pollarding**

- Pollarding is the complete removal of all the limbs of a tree leaving just a trunk section 2-5 metres high. The trunk then sprouts from the pollard head with multiple shoots. It was a historically common way of managing hedgerow trees and trees on commons to produce fuel wood and small structural timbers by cutting the regrowth (re-pollarding) on a cycle of 15-25 years.
- Pollarding usually introduces decay to the main stem and once started the cycle must be repeated at intervals of 3-20 years, depending on species. If the re-pollarding cycle has lapsed, the tree may have become structurally insecure. However, it may be necessary to reduce the crown in stages (see below: crown retrenchment) in order to return the tree to an active pollard. Re-pollarding a lapsed pollard aggressively can all too often lead to its death.
- Only young trees can be successfully pollarded for the first time and success may vary between species. However, regularly pollarded trees can live for centuries and the central decay of the trunk is a valuable habitat for saproxylic invertebrates.

### **Crown retrenchment**

- This is a skilled process of manipulating the hormone balance in the crown of a tree by staged reduction in order to maintain the promotion new growth until full re-pollarding is achieved.

## **Step 4: Types of pruning cuts**

### **Target pruning**

- Pruning cuts made for **architectural** reasons and in particular cuts adjacent to the main stem should be made strictly by 'target' pruning rules: cutting immediately outside the branch collar, at the mirror angle from the long axis of the larger timber as the angle of the branch bark ridge. If target pruning is your chosen technique, ensure that cuts throughout the crown are made this way and do not restrict this technique to cuts made against the main stem.

### **Conservation cutting**

- Conservation cutting attempts to mimic the ways a tree breaks naturally. The jagged stubs and surfaces produced when a limb detaches naturally, provide many more micro-habitats habitats for wildlife than the smooth cut of a saw.

- Conservation cutting may be carried out on live or deadwood and indeed the retention of deadwood, where it can be made safe, is a central aim of conservation arborists.
- The most natural effect can be achieved by making an acute cut with the nose of a chainsaw along the top of the branch and letting the branch rip away under its own weight. However, this is relatively uncontrolled and in most circumstances it will be necessary to remove the branch conventionally and sculpture the resultant end afterwards.
- Sculpturing cut ends of branches to mimic natural breaks requires a sharp and powerful saw to make cuts **along** the grain.
- Blunt ended cuts like a decorated tomato in a cheap restaurant are completely unnatural and should not be made in the name of conservation cutting.

### **Early veteranisation**

- This is a specialised technique intended to create the sort of habitats that usually develop in old trees - only much earlier in their lifecycle.
- The characteristics of a veteran tree are: a higher proportion of dead and decaying wood in the crown; a number of large and complex snags created by branch detachments and deep decay in the main stem often with substantial cavities.

### **Overview**

The advice given above is intended to guide owners and contractors and to reduce the incidence of “convenience” pruning that is becoming far too common. Tree work specifications are just that – they are not for the convenience of the contractor; they are intended to achieve identified aims. “Pudding basin “ haircuts given from a MEWP or old fashioned Norfolk “crowning” done with the excuse that it encourages new growth are **not** acceptable.

Tree and Countryside Officer

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