

NORTHUMBERLAND

Northumberland County Council

Pruning Mature Trees

Pruning is the most common tree maintenance procedure. Although forest trees grow quite well without any formal pruning, landscape trees require a higher level of care to maintain their safety and aesthetics. Pruning should be done with an understanding of how the tree responds to each cut. Improper pruning can cause damage that will last for the life of the tree, or worse, shorten the tree's life.

Reasons for Pruning

Because each cut has the potential to change the growth of the tree, no branch should be removed without a reason. Common reasons for pruning are to remove dead branches, to remove crossing and rubbing branches, and to eliminate hazards. Trees may also be pruned to increase light and air penetration to the inside of the tree's crown or to the landscape below. In most cases, mature trees are pruned to prevent defects occurring or to correct those already present.

Regular pruning does not enhance the health of a tree. A tree produces a dense canopy of leaves in order to trap as much sunlight as possible, in order to produce the sugars needed for growth and repair. The repeated pruning away of these leaves and branches reduces the tree's ability to produce and store these sugars.

In urban areas people and trees need to co exist. For this to happen we need to manage our trees to ensure the safety of people and their property. Proper pruning will help to remove defective parts of a tree and help to maintain good tree health, which can enhance the aesthetics of an area.

When to Prune

Most routine pruning to remove weak, diseased, or dead limbs can be accomplished at any time during the year, however it is generally undertaken during the autumn and winter months when there is time for the tree to begin to repair the wounds prior to the spring

growth flush. Some trees, such as maples and birches, tend to weep sap if pruned early in the spring. It may be unsightly, but it is of little consequence to the tree.

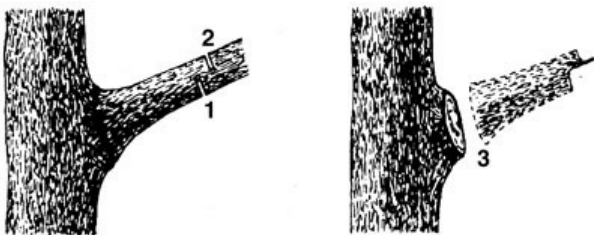
A few tree diseases can be spread when pruning wounds allow spores access into the tree. Susceptible trees should not be pruned during active transmission periods.

Heavy pruning during the spring should be avoided. The tree has expended a great deal of energy to produce the new growth. The removal of a high volume of new leaves and branches can stress a tree.

Making Proper Pruning Cuts

Pruning cuts should be made just outside the branch collar. The branch collar contains trunk or parent branch tissue and should not be damaged or removed. If the trunk collar has grown out on a dead limb to be removed, make the cut just beyond the collar. Do not cut the collar.

If a large limb is to be removed, its weight should first be reduced in order to prevent tearing the bark. This is done by making an undercut about 30 -40cm from the limb's point of attachment. Make a second cut from the top, directly above approximately 10cm farther out on the limb. Doing so removes the limb, leaving the 30-40cm stub. Remove the stub by cutting back to the branch collar. This technique reduces the possibility of tearing the bark.



Use the three-cut method to remove a large limb.

Pruning Techniques

Specific types of pruning may be necessary to maintain a mature tree in a healthy, safe, and attractive condition.

Cleaning is the removal of dead, dying, diseased, crossing and rubbing branches from the crown of a tree.

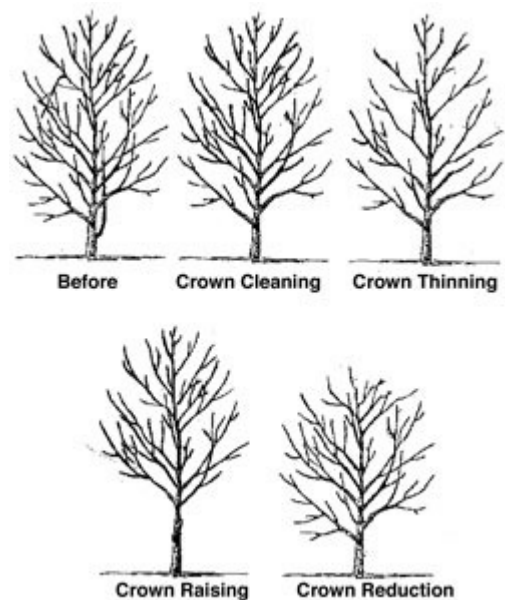
Thinning is the selective removal of branches to increase light penetration and air movement through the crown. Thinning opens the foliage of a tree, reduces weight on heavy limbs, and helps retain the tree's natural shape.

Raising removes the lower branches from a tree in order to provide clearance for buildings, vehicles, pedestrians, and improve views.

Reduction reduces the size of a tree, often for clearance for utility lines. Reducing the height or spread of a tree is best accomplished by pruning back the leaders and branch ends to side branches that are large enough to assume the terminal roles (at least one-third the diameter of the cut stem). Compared to topping, reduction helps maintain the form and structural integrity of the tree.

How Much Should Be Pruned?

The amount of live tissue that should be removed depends on the tree size, species, and age, as well as the pruning objectives. Younger trees tolerate the removal of a higher percentage of living tissue better than mature trees do. An important principle to remember is that a tree can recover from several small pruning wounds faster than from one large wound.



A common mistake is to over thin the centre of the crown leaving a high percentage of branches at end of the main limbs. This is called 'lion-tailing' and can lead to failure of the branch.

Mature trees should require little routine pruning. A widely accepted rule of thumb is never to remove more than one-quarter of a tree's leaf-bearing crown. In a mature tree, pruning even that much could have negative effects. Removing even a single, large-diameter limb can create a wound that the tree may not be able to close. The older and larger a tree becomes, the less energy it has in reserve to close wounds and defend against decay or insect attack. The pruning of large mature trees is usually limited to removal of dead or potentially hazardous limbs.

Wound Dressings

Wound dressings were once thought to help the closure of wounds and fend off insects and disease. It is now widely accepted that wound dressings are ineffective and a tree should be left to close a pruning wound naturally.

Hiring an Arborist

Pruning large trees can be dangerous. If pruning work is required it is prudent to obtain the services of a trained tree care professional. A professional arborist can provide the services of a trained crew, with all of the required safety equipment and liability insurance.

There are a variety of things to look for when selecting an arborist:

- membership in professional organizations such as the International Society of Arboriculture (ISA), Arboricultural Association (AA)
- certification through ISA's Certified Arborist program
- proof of insurance
- list of references (don't hesitate to check)

Avoid using the services of any tree company that

- advertises topping as a service provided; knowledgeable arborists know that topping is harmful to trees and is not an accepted practice
- uses tree climbing spikes to climb trees that are being pruned; climbing spikes can damage trees, and their use should be limited to trees that are being removed.

If you would like to know more about pruning a mature tree or about mature tree care in general, contact Northumberland County Council on 0845 6006400 and ask to speak to your local Tree and Woodlands Officer.