Brighton & Hove City Council

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Arboricultural Information Note No. 7

Tree Pruning

Why Prune?

Trees are often planted as features within gardens or as screens on boundaries. If they are not regularly maintained, they may outgrow their position causing common problems such as reducing light levels to properties and gardens, becoming obstructions, and causing problems by overhanging neighbouring boundaries.

Once the decision has been made to prune, your next decision is whether or not to tackle the job yourself. In the case of a large tree where you need to remove big branches in the upper area of the crown, it may be best to seek professional advice (see Arboricultural Information Note No. 4).

When is the best time to prune?

As a general rule, pruning is best carried out when the tree is dormant, between November and February. There are, however, exceptions to this rule. All Juglans species (Walnut) will 'bleed' (prolific leaking of sap) profusely if not pruned in full leaf in mid to late summer. Many Rosaceae species such as Cherry, Apple and Plum, are best pruned in the summer months as they are susceptible to the fungal disease "Silver leaf" (Chondrostereum purpureum). This fungus prefers the damper conditions of autumn/winter and is less likely to be active during the drier summer months.

Many broad-leaved tree species, such as Birch, Maple and Hornbeam, also have a tendency to 'bleed' if pruned between late winter and early spring. This condition is caused by increased sap flow in preparation of bud development. Therefore it is best to avoid pruning at this time if possible. It is, however, unusual for this condition to cause long-term damage.

The tree's response

Any pruning carried out on an actively growing tree will bring about a response. Leaves obviously provide a vital function for the tree, producing both sugars and starches through the process of photosynthesis and allowing the transfer of gases via transpiration. The tree's natural response to a reduction in leaf cover is to produce vigorous re-growth in an attempt to compensate for this loss. This can often take the form of dormant buds within the crown and on the stem becoming active. In time these can create a denser crown than before pruning took place.

When a branch is removed from a tree, its natural response is to compartmentalise (isolate) the area in a bid to resist any inward progression of fungus and other diseases and to protect new wood formed after pruning has taken place. Incorrectly placed pruning cuts can seriously inhibit this process and have long term detrimental effects on both the tree's health and stability.

How to remove a branch correctly

The position of the cut should be selected with care; as already mentioned, it is important to remove a branch at the correct point. At the junction where a branch joins a stem there is normally an obvious ridge of tissue (not always obvious in conifers); this is known as the branch bark ridge/collar (fig 1). It is important to cut as close to this as possible, but NOT into it. This area is responsible for the healthy sealing of the wound. Care should be taken to prune back to a healthy bud or branch junction. Failure to do this may result in leaving a stump, which may then die back to the nearest bud/junction and facilitate the advancement of pathogens (disease organisms).

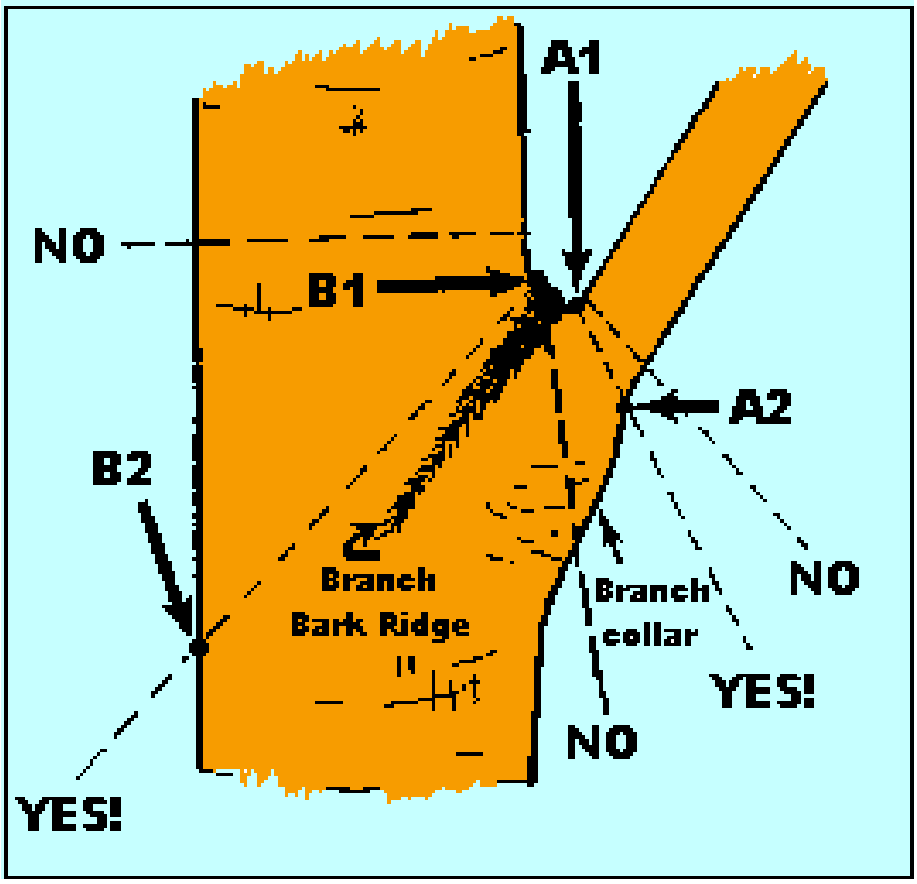

Fig 1

Removing heavy branches

When removing heavy branches, care should be taken to avoid tearing. It is advisable to use the 3-cut method (Fig 2). This involves: **(1)** making a cut on the underside of the branch to be removed several centimetres away from the final cut – this helps to avoid the branch tearing; **(2)** making a further cut on the upper side of the branch several centimetres in front of cut 1; **(3)** the small remaining stub can then be pruned back to the aforementioned branch bark ridge. It should be remembered that the removal of large heavy branches could be a hazardous procedure and professional advice is strongly recommended.

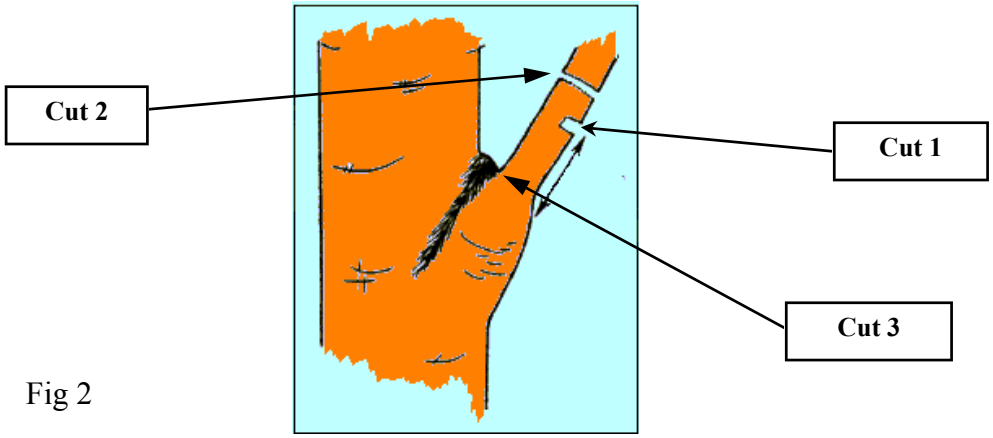

Fig 2

Many trees, as they develop, accumulate dead twigs or branches. This is often a result of light deprivation as the crown develops and matures above. These should be removed (Fig 3) as they can be unsightly and can harbour pests and diseases.

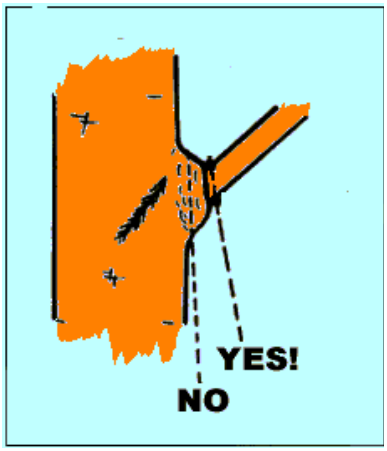

Fig 3

Wound treatment

Wound dressings were once thought to accelerate wound closure, protect against insects and diseases, and reduce decay. However, research has shown that dressings do not reduce decay and rarely prevent insect or disease infestations. It has also been established that the rapid closure of wounds has the potential to create future structural weaknesses. A situation where a wound treatment would be recommended would be as a precautionary measure against conditions such as Silver Leaf.

Tools and equipment

The following list is intended to give an idea of the range of tools suitable for the tasks mentioned above.

Secateurs

These are hand-held pruners with one or two cutting blades made of stainless or carbon steel. There are 3 types: Anvil secateurs which have a straight upper blade which cuts down on an anvil block (this type is best avoided as the cutting action can cause a crushing type injury); by-pass secateurs which work like scissors – the upper sharpened blade cuts against a broad lower blade; parrot-beak secateurs, which have two sharpened blades which cut when closed together. Secateurs are used for light pruning – they cut through material up to 10mm in diameter.

Pruning saws

There are several different types: double-edged pruning saw, folding saw, Grecian saw, and bow saw; all are steel and have heat treated teeth. All have teeth designed to cut on the pull stroke. They are used where required cuts will be above 25mm in diameter. The choice of saw type depends on the size of branches to be cut and the amount of working space within the shrub or tree branches. It is recommended that woodworking saws are not used to carry out pruning.

Loppers

These have one or two cutting blades. They work in the same way as secateurs but have handles up to 60cm long. There are three types: anvil loppers, which have a straight upper blade which cuts down on an anvil block (this type is best avoided as the cutting action can cause a crushing type injury); by-pass loppers, which work like scissors – the upper sharpened blade cuts against a broad lower blade; parrot-beak loppers, which have two sharpened blades which cut when closed together. Loppers are a useful tool for working high up, or in dense, prickly shrubbery. The long handles offer more leverage and cut stems up to 25mm thick.

Long-handled tree pruners

These have a cutting device on the end of a long pole. The hook is placed over the branch and cut by operating the handle. The wire or cord pull from the handle activates the spring-loaded carbon steel blade. Tree pruners may also have a saw attachment. They are used on light branches up to 25mm diameter that are out of reach.

Blades need to be kept sharp, clean and dry, moving parts need oiling and blades need regular replacement. Strong gloves, eye and head protection should be worn.

Before carrying out pruning work on your tree it is advisable to consult the City's Arboricultural Service to ascertain whether your tree is growing within a conservation area, or is under the protection of a tree preservation order. Enquiries can be made by calling (01273) 292929.

Similarly, general enquiries concerning any elements of this information note can be made by calling the Arboricultural Officers on (01273) 292929.

January 2005