



# HOW TO PREPARE FOR FELLING A TREE



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It is important that you plan tree felling very carefully. Trees must be felled safely and in the direction that you want them to fall. Well-planned felling also makes it easier to continue with your planned work. The factor that first and foremost affects tree felling is whether there are major obstacles in the area (overhead lines, roads and buildings, etc.). Deploy warning signs if you know that the forestry area is crossed by a road or that a lot of people pass through the area every day.

## Plan the felling

Start planning the felling work before you arrive at the tree. Decide felling direction. Note the different factors that could affect the felling, such as wind direction, wind strength, slope and obstacles around the area.

Study the tree. Has it been damaged by decay, cracks or some other factor? Is there a risk of dry or broken branches falling from the tree or from adjacent trees? Is the tree leaning? In which direction should the tree be felled bearing in mind the limbing and crosscutting work to come.



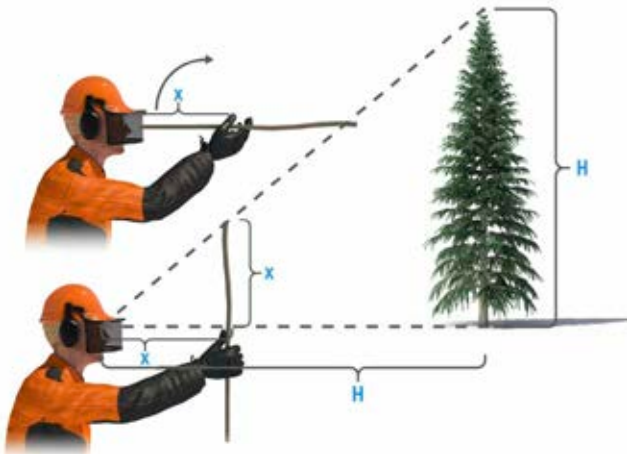
## Check the height of the tree

It is often easy to misjudge the length of trees. Always estimate the tree's length before felling it, especially in hazardous and confined locations, for example close to other trees, buildings, overhead power lines, etc.



## METHOD

### A simple way of estimating how tall a tree is



1

Hold a stick with your arm stretched out straight in front of you so that the stick length (X) is equal to the distance between your eye and hand.

2

Then rotate the stick vertically to create a right-angled isosceles triangle between your eye, hand and the top of the stick.

3

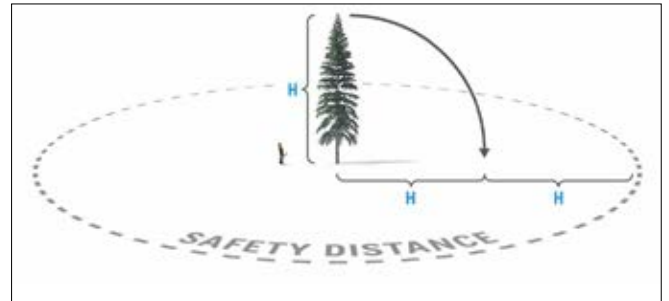
Point at the tree and move around until you stand at a distance so that the tree appears to be as tall as the length of your stick. If the tree is leaning, you get a more accurate estimate if you measure from the side, so that the tree is neither leaning towards you or away from you.

4

The distance between you and the tree (H) is now equal to the height of the tree (H). Step out the distance, or measure with a tape measure. Always add a hefty margin of error.

## Safety distance

Before felling, you should make sure that there are no people within a distance of at least twice the tree height from the tree you intend to fall. If only one person is felling, a safety distance equal to one tree length is sufficient. You and your work colleague should use signal coloured jackets or vests to be easily visible to each other and passers by.



## METHOD

### Measure the lean of the tree

To measure the lean of a tree, you need a plumb line, such as a nut tied to the end of a string.



1

Aim towards the top of the tree trunk. Note where the plumb line hits the ground.

2

Measure the distance from the plumb line's point of impact to the centre of the trunk.

## Fell in the natural direction of fall if possible

Most trees have a natural direction of fall. This is affected by the tree's lean, the shape of the branches and any crown snow-load (snow-covered branches). If you are unsure of the tree lean, move a little away from the tree and check with a plumb rule.



To a certain extent, it is possible to force a tree to fall against its natural direction of fall, but this is always at a cost of increasing the risk and of the extra physical exertion needed. It requires knowledge, skills and experience together with the right felling support tools. Trees with weak timber, such as dead or decayed trees, should always be felled in the easiest direction.

### Clear the undergrowth

Always clear around the tree so that you can fell it without obstacles. Also clear in the intended felling direction. Small trees, shrubs and branches could obscure the line when you determine the direction of fall.



### Plan and clear your escape routes

The escape paths are your lifeline. When the tree starts to fall, you need to quickly move to safety. Cut down obscuring shrubs and small trees in your path of retreat, about 45 degrees behind the tree in both directions. Clear the ground of branches and other obstacles. You must always stand at around a 45-degree angle behind the tree at a safe distance when it falls. Very large trees require a longer safety distance. Uneven ground and trees with large and thick branches can cause the trunk to fall sideways, jump up or slide. The tree can also move backward and hit the ground with full impact. Also look out for dry branches when the tree falls.



### Prune low branches

Pruning makes the felling safer by removing low branches and twigs which are in the way. The safest way to prune is to work with a pulling chain (underside of the guide bar) from the top down. Use the trunk as a barrier between you and the saw. Never prune higher than shoulder height. Follow the work pattern as shown here (steps 1 to 4) .

