



Tree Hinging Introduction



Hinging (also called laying, folding or pleaching) trees into a watercourse is an excellent way of adding flow diversity and roughness to a channel. Hinging replicates the natural process of trees falling into the channel, with the added benefit that the hinged section of tree should continue to grow, developing even more habitat complexity over time.

Willows are the best type of trees for hinging directly into the channel and can still thrive with up to 50% of their canopy submerged. Many other species also hinge well but should be laid into shallower areas or along the river margin, to ensure that the majority of their canopy remains in the dry.

Small, pliable species like, willow, hazel, elm, hawthorn and even alder (with a bit of practice) can easily be hinged, using hand tools such as pruning or bow saws. Trunks or limbs up to 100 – 150mm diameter can be cut by hand, in a process much like hedge laying. The more brittle species such as sycamore, ash or elder should generally be avoided as they tend to break off rather than bend.

In its simplest form, hinging involves a single quick cut through the first two-thirds of the trunk/branch, then continuing to cut a little at a time until the trunk/branch collapses down over the river or along the bank (depending upon species). The cut should be made from the exact opposite side of the tree to the desired felling direction. This is similar to conventional tree felling, however the face cut should be omitted. As a result the retained material forms the necessary hinge.





Advanced Hinging



A more advanced technique for suitably-qualified chainsaw operators to use on large or leaning trees, utilises a plunge or bore cut. This defines the extent of the hinge first, while retaining holding wood at the back side of the tree. The final fell can then be achieved by extending the plunge cut out to the back side of the tree, or with a dog tooth cut, from the back (as above). This method provides more control over the extent of the hinge, and can be safer with large or leaning trees.

When hinging larger or leaning trees, please also take the following into account:

- This is specialist work and should only be undertaken by trained, experienced personnel and proper assessment of the risks
- Large crack willows can hinge well, but may be susceptible to cracking or “barber-chairing” (collapsing and folding back on itself)
- Alders tend not to produce a strong hinge, so may not be appropriate in high energy or high flood risk areas. They can also crack suddenly, especially if badly affected by *Phytophthora* disease. However, smaller trunks can be laid effectively with practice and in appropriate places
- Poplars can be tricky too: the bark tends to crumple and ruck up (reducing their survival rate), and should only be used if nothing else is available
- Ash and sycamore are very brittle, and tend to lay very poorly as a result
- In cold weather, trees can react particularly explosively to being cut – failing more suddenly, and splitting further and in a less controlled way

