

## INITIAL WORK

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## Hedging

### 9 Laying the 'Standard' or Midlands hedge

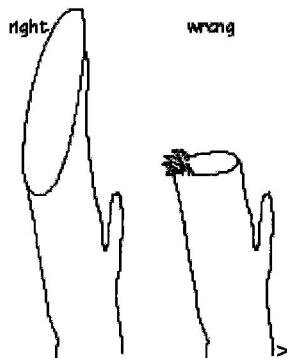
#### Preparation for laying

Remove all rubbish from the hedge, including old wire, sheet metal or rails put in to block gaps, tins, bottles and anything else which will interfere with the work and possibly damage the tools (see Chapter 8, section Planning the work, Hedge cuttings and rubbish).

#### Preliminary trimming

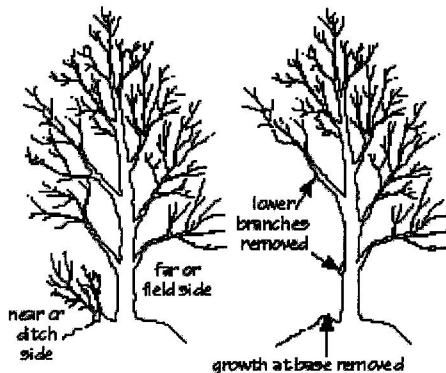
The amount of work involved will depend on the state of the hedge, and a neglected hedge will need heavier trimming (Chapter 10, section Strategies for restoration, Siding up or ribbing). Firstly cut and pull out as much of the bramble, clematis or other scrambling plants which you can, as these will hinder the laying process. Cut out any elder plants, as these cannot be laid due to the brittleness of the stems. Elder suppresses other plants, and is not a good hedging shrub. Try to remove the stump later. Cutting can be done using a slasher or billhook, though beginners may prefer to use loppers. A small chain saw can also be used by qualified persons.

When using a slasher or billhook, trim as much as possible with an upward stroke. Cut with, rather than directly across the grain of the branches for a neater, easier job.



Trim back the brushy side growth along the near side of the hedge, using a slasher or chain saw. Cut away enough to open up the stems for convenient pleaching and laying, but leave the tops of the trees bushy so that they form an effective barrier when laid. Ideally, trees for laying should be about 12' (3.6m) high, and can be trimmed on the near side up to a height of about 8' (2.4m) with the slasher. If the trees are short however, it is best to avoid trimming much off the sides until the trees are laid and in position, so that you can be sure that enough brush is left to make a dense, living barrier.

Remove excess leafmould, deadwood and other material from around the base of the trees to provide a clear cutting area. Hook the material out with a slasher or billhook, or trample it in as convenient.



## CUTTING &amp; LAYING

[back](#)**Hedging****9 Laying the 'Standard' or Midlands hedge****Cutting and laying the pleachers**

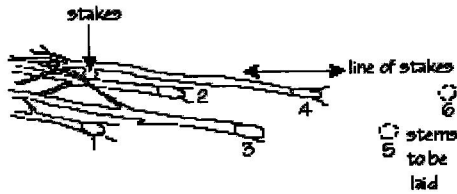
Different craftsmen have different terms for the work described here. For clarity, 'cutting' is defined as the partial severing of the stems in order to bend them over. To 'lay' is to actually bend the stems and position them at the correct angle. The stems which are treated in this way are known as 'pleachers'.

**Selecting the pleachers**

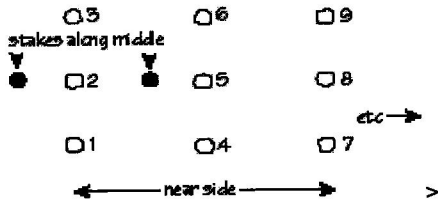
The following points summarise the strategy for selecting pleachers from a hedge in good condition for laying, with adequate stems to choose from:

- Cut out trees which are well out of line of the original hedgerow plantings, especially those growing from the ditch side. To use these as pleachers would encourage the further widening of the hedge, with a weakening of the main line plants. It would make it more difficult to form an effective laid barrier the next time. Trees growing from the ditch side also tend to break down the bank and clog the ditch.
- Cut or pull out all deadwood. This includes dead standing stems and old pleachers which have been gradually suppressed by vigorous upward-growing shoots. Excess deadwood makes it more difficult to lay the new pleachers and may suppress new growth, although some hedgers heatedly dispute this latter point. However, it is better to insert a moderate number of sturdy deadwood pleachers than to leave a hedge which is gappy or low in places due to insufficient or too short live material. See also Chapter 10, section Laying a neglected hedge, Gaps, Deadwood.
- Cut out excess livewood in the hedge line. As with deadwood, too many live pleachers tend to suppress new growth. Cut out smoothwood species in preference to thorns, if the thorns are suitably positioned for laying. Cut out crooked and awkward-shaped stems. However, keep more than enough stems until you are sure they aren't needed. You must cut out enough stems to allow access to the chosen pleachers, but you want to avoid the situation where a pleacher is accidentally cut through or is found to be rotten, and there is nothing left to replace it with. Once the pleacher is safely laid and in position, the rest of the surrounding livewood can be dispatched.
- Use as many separate plants for pleachers as possible, within the limits set above. It often happens that you can choose between laying several of the stems of a multiple-stemmed tree, or entirely cutting out all but one or two of the stems and laying the adjacent plant as well. Choose the latter alternative, as this will give better spaced pleachers. Otherwise the hedge tends increasingly to be made up of a few multi-stemmed trees with large gaps in between, which makes for much more difficult maintenance in the future.
- The stems you want to lay can be lightened by cutting away unwanted side branches, so the pleachers are easier to handle. However, aim to leave more rather than less, as any excess can be cut away after the pleacher is laid, and you need to leave enough to give thickness to the hedge.
- Beware of any stems which are held up by the rest of the hedge, and which may fall unexpectedly.
- Look carefully at the base of the stem, especially on the side where you want to retain the 'tongue'. If it looks mottled, flaky or with no bark, it's probably rotten and will break when you cut or lay it (Chapter 10, section Laying a neglected hedge, Large stools, Laying from the root).
- Before cutting and laying any pleacher, make sure it is free of entanglement. Tug the upper part of the stem. If it is hung up, cut it free with a slasher or loppers. You may have to cut off branches with an axe or billhook if they are seriously tangled, but try to keep enough brash near the end for the pleacher to be effective. You must be able to lower the stem gently into position once it is cut, or it may twist, kink or break off. Make sure you cut and lay the stems in the right order. The diagram below shows an idealised order of cutting. The stems at the front are usually laid quite low. The stems at the back may have to come slightly forward on top of the other stems in order to 'catch' a stake.

PLAN VIEW OF HEDGE  
double staggered row of stems · order of laying  
· stakes on far side



PLAN VIEW OF HEDGE  
many stems · idealised pattern · order of laying



Hedgerows are seldom accommodating. They are either thin and gappy, or dense and tangled. Trees never lie in a single straight row. Most hedges are originally planted in a double staggered row, and over time some trees die or are suppressed by their more vigorous neighbours. Suckers spring up to the sides of the parent trees and new individuals seed in around the plantings, further confusing the planting line.

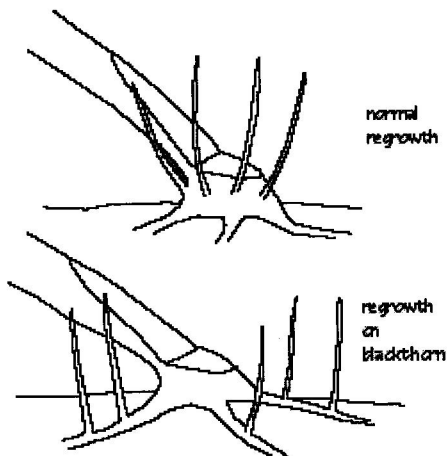
If the hedge is sparse, every possible stem must be laid, with the exception of elder, which is always removed. Gap-closing expedients are described in Chapter 10, section Laying a neglected hedge, Gaps.

### Cutting the pleachers

There are various different methods of cutting a pleacher, using a selection of tools, and skilled hedgers develop their own particular techniques. However, there are important general principles to follow.

The aim is to cut each pleacher so that the stem can bend over at a point more than 1" (25mm) but less than about 4" (100mm) off the ground. In order to do this, you will need to start the cut at a point about three times as high as the stem is wide.

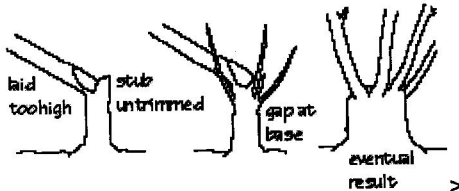
Trees seldom regrow right from the cut surface, but from a point about 1" (25mm) below this, due to the wood just under the cut being killed by frost and water penetration. This is the reason for leaving a stump of at least 1" (25mm). An exception is blackthorn, which tends to sucker from roots to the side of the cut stem.



It is tempting to lay too high, especially on older trees where the stem may be thick or gnarled at the base. High laying is a mistake, for the following reasons:

- Stems laid too high may leave a gap at the base of the hedge.

- Stems laid so they angle downwards will not survive, as the sap flow is cut off at the bend.
- Stems laid high will sprout high. The next person to lay the hedge will have even more difficulty laying from the base.



The cutting techniques below are described and illustrated for a right handed worker.

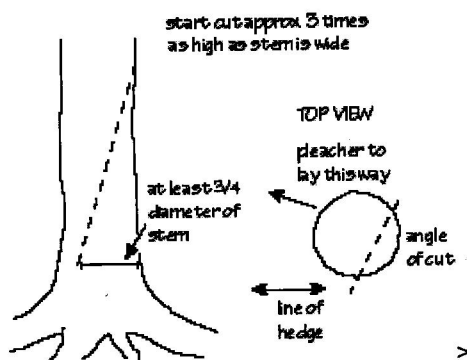
### Method 1

This is the traditional method, using a billhook or axe for the main cut, and normally a bow saw to trim the stub. It requires skill to cut the stem at the correct angle and to the right point with the minimum of blows, but it is a skill worth acquiring. Beginners should preferably learn billhook skills by practising on stems which are going to be coppiced or cut out of the hedge, where the stem is to be severed anyway. Another idea is to cut out of the hedge some of the excess stems which are anyway going to be removed, trim them and set them firmly in the ground away from the hedge line. Beginners can then practise on these.

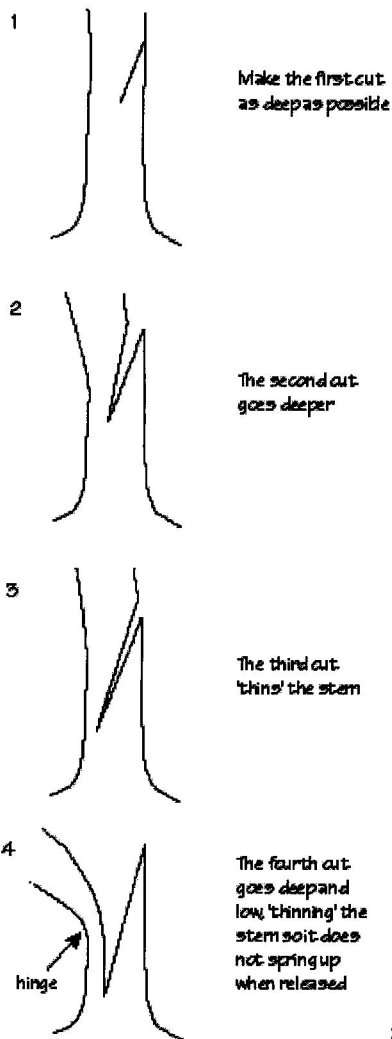
Avoid the situation where a beginner struggles with a difficult or thick stem, which they end up hacking at repeatedly. This is damaging to the plant, and demoralising for the volunteer.

Use a billhook on stems up to about 3" (75mm) in diameter at the base.

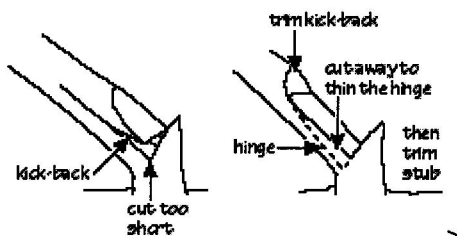
1. Cut at a sharp downward angle with (not across) the grain. This applies to all cutting with a billhook, and all cutting with an axe unless the intention is to chop through a thick stem. Start at a point about three times as high as the width of the stem, and slightly angled as shown so that the pleacher will lay to the field side of the hedge.



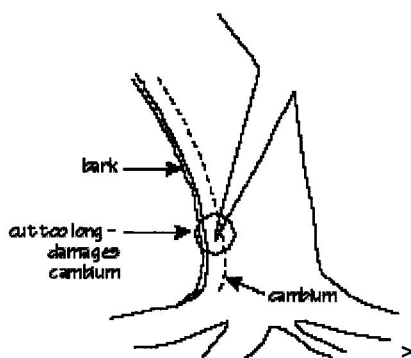
2. The cut should end rather more than three-quarters of the way through the stem, and as low as possible. An experienced hedger can cut to seven-eighths of the way through the stem, and on a stem of about 3" (75mm) diameter, should be able to make the cut with about four blows of the billhook, as shown below. The stem should be thought of as being 'thinned' or split, rather than being cut.



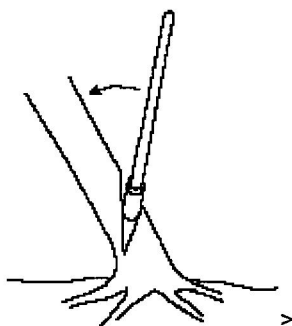
Cutting to the exact point requires skill and practice, as well as an ability to judge the flexibility and strength of each stem. You must be able to lay the stem over without wrenching it or causing the hinge to break. If you start the cut too low, or don't cut far enough through before bending it over, the stem starts to split upwards. This is a common fault with novice hedge layers, and produces a split called a kick-back, backsplit, hake's mouth or, translated from Welsh, a pig's mouth. If this happens, cut the pleacher to remove the kick-back, and then force the cut downwards by cutting and twisting the axe in the cut, or apply pressure with a foot on the pleacher.



If you cut too far, you will sever the living layer or leave the pleacher hanging by a weak strip, so that it breaks under stress or under the weight of pleachers laid on top of it.



3. As you cut, the stem should split downwards. Try and open the stem by gradual pressure with your left hand, but don't pull too hard when part way through the cut, or a kick-back will result. When you near the point where you want the cut to stop, gently pull the stem with the left hand down and to the left, to open up the mouth of the cut. Then continue cutting and pulling at the same time until the pleacher can be eased into position. This keeps the tool from binding in the cut and gives you greatest control over the pleacher's descent. When laying with a larger axe, you may need to cut part way using both hands, then stop to test the pleacher, then cut further with both hands, being ready to stop so that you can grab the pleacher with your left hand, support it and lower it.
4. If the pleacher does not lay easily with gentle pulling, place the axe blade in the cut and lever gently to extend the cut slightly, while controlling the fall with the left hand.



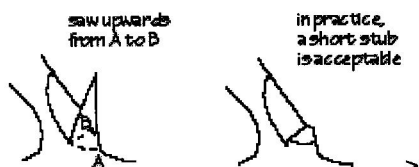
Some hedgers use the billhook to twist and 'crack' open the stem after each cut. With the right tool and in skilled hands this can be very effective, but is not generally recommended, as many modern billhooks are welded where the blade joins the tang inside the handle, and twisting weakens the weld. The weld can then later fail when the tool is in use, causing the blade to fly off. Only use a billhook as a lever if you are sure the tool is strong enough. It helps to pull the billhook towards you after each cut, so that the larger, hook part of the blade is in the cut as you gently lever.

5. On thinner stems it may help to make a tension-releasing cut first, beginning at a point below that of the final cut. The lower cut should not extend below the level at which the final cut will end.

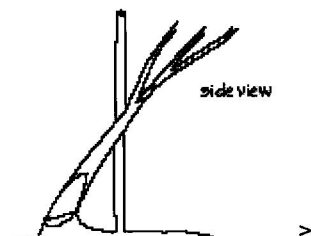
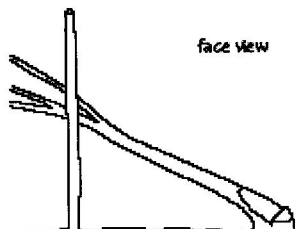


6. Trim the protruding stub after the pleacher is laid and in position. The traditional method was to use the axe or billhook, but many hedgers now use the bow saw. In the past some hedgers have claimed that trees which are sawn survive less readily and sprout less well due to the shattering of the grain. This seems unlikely, as the cut surface dies however it is cut, and as described above, the shoots arise about 1" (25mm) below the cut surface. There is little room to accurately swing an edged tool, and repeated hacking at the stump is likely to loosen it and cause root damage.

Begin the saw cut about 1" (25mm) above ground level and cut upwards, aiming to end at the point where the pleacher has been bent over, to cleanly remove the stub. In practice, many hedgers cut to leave a small stub as shown. This does not seem to cause any problems with water gathering and causing rot. For beginners, this allows for a small 'safety margin', to avoid taking the cut too low and damaging the hinge. However, it is important that there are no sharp projecting stubs which can be dangerous to stock. Cows have been known to bleed to death after slipping and falling on an untrimmed stub while trying to push through the hedge.



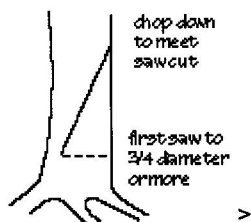
Note also the angle of the trimmed stub, which when viewed facing the hedge, slopes upwards along the line of the cut and upwards towards the hedge. When viewed from the face side, the white of the trimmed stub thus shows the same as the angle of the main cut.



Many professional hedge layers allow the main cut to split right down to ground level as shown, and it is in the nature of the wood that this will happen as the pleacher is laid. This allows the stub to be cut very low, and forces the plant to sprout at ground level, making the hedge stockproof low down, and making it easier to re-lay in the future. This cut to ground level does not seem to result in rot or other damage to the stool.

### Method 2

This method of cutting and laying is sometimes recommended for beginners. The stem is first sawn directly across at 1-2" (25-50mm) above the ground, stopping at the point where you want the stem to bend over. The wedge of wood is then cut away using a billhook or axe. The theory is that the saw cut gives the beginner a point to aim for, and that the wood being removed comes away easily at the saw cut. In practice, this method has some disadvantages:

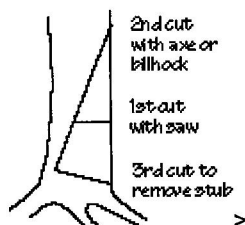


- a. A kick-back is more likely to develop than with method 1 above.
- b. Once the wedge has fallen away you have nothing to lever against.
- c. Effort tends to get diverted into removing the wedge in slivers, rather than in making a single downward cut. Removing this amount of wood by repeated hacking is very time consuming, hard on the wrist, and damaging to the tree.



It is suggested that beginners learn the first method described above, by practising as necessary on expendable stems (see Chapter 9 section Cutting and laying pleachers, Cutting pleachers, Method 1).

There may however be some merit in making a horizontal cut on larger stems, well above the position of the final cut of the stub. This gives a point to aim for, and allows removal of the upper part of the stub so that it doesn't get in the way as you lengthen the cut downwards. The lower part of the stub remains to be levered against.



Larger or difficult stems should not be attempted by a beginner, but should be left to a more experienced hedger using hand tools or a chain saw.

### Chain saw

Chain saws must only be used by trained operators. BTCV offers training courses, and certification for chain saw use on BTCV projects.

Note the following points:

- a. Laying pleachers with a chain saw not only requires a trained operator, but one who is skilled in hedging and chain saw use. With the speed of cutting, it is very easy to cut right through the pleacher.
- b. A chain saw makes the work of cutting old, thick pleachers very much quicker and easier. Many of the hedges which are laid today are neglected, with thick, old and gnarled pleachers. Particularly on neglected hedges, a chain saw takes away much of the hard slog for beginners, and allows them to concentrate on the skills of pleacher selection, laying, staking and binding. However, some people do like to get 'stuck in' and have the satisfaction of meeting a challenge! On a weekend project or training course, the use of a chain saw will make a significant difference to the amount of work finished, and the satisfaction level achieved. It is very demoralising for volunteers to have to tackle awkward jobs with hand tools, that can be done in seconds with a chain saw.
- c. On a group project, the chain saw operator needs to 'take a back seat', and only lend a hand when the hedging pair request help. Otherwise there is a danger of the chain saw operator taking over and making all the decisions of pleacher selection and laying, leaving the trainees in their wake. There is also the factor that beginners are never going to learn hand tool skills if the chain saw is used.
- d. The chain saw allows the hedge to be laid 'wrong-handed', as a right handed person can make a left-hand cut, and vice versa, which is not easy with hand tools. This can be very useful when the slope of the land or position of a fence dictates the direction of lay.
- e. The chain saw can be used in spaces more confined than allowed by the billhook, axe or bow saw. A small chain saw can also be used as a trimming tool, to trim the hedge before laying.
- f. As discussed above, a quick, clean cut with a chain saw is likely to be less damaging to the stem, stool and roots of a plant than is repeated whacking with an edged tool.
- g. You can spend a lot of time using hand tools, only to find that the pleacher is rotten and breaks, or isn't suitable. This can be quite disheartening for the beginner.

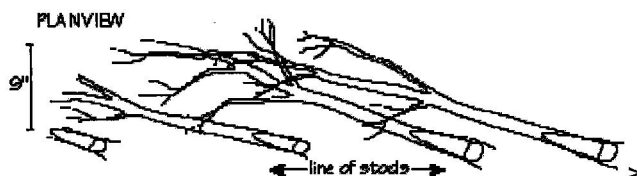
### Laying the pleachers

1. Lower each pleacher gently into place, trying not to twist or shake it in the process. Sap will not flow properly to a sharply twisted stem. If you have to shake or bash the pleacher into position, you may break or tear it off the stump.
2. Pleachers should be laid at an angle of about 35-45 degrees from the horizontal, determined to some extent by the number, location and length of pleachers. The 'build' of a hedge maintains the correct angle of the pleachers. It is hard to regain the correct angle if the hedge starts to lay too flat, and it is worth spending time sorting out each stem in order to keep the correct 'build' of the hedge. Where there is a gap, pleachers may have to be laid low to fill the opening at ground level, and other pleachers brought in above at a steeper angle if possible. Where the pleacher stems are fairly bare between the base and brushy top, they again should be laid at a lesser angle in order to make best use of the brush on the far side of the hedge. The hedge can be kept to a sufficient finished height by also laying some at the proper angle. For use of deadwood in gaps, see Chapter 10, section Laying a neglected hedge, Gaps, Deadwood.

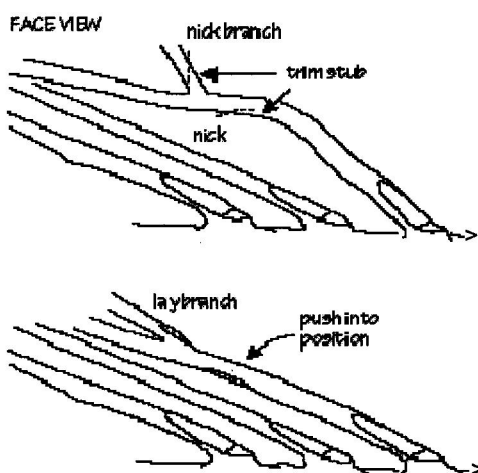
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3. Lay the pleachers about 9" (225mm) off the stumps. In other words, the end of the main stem or branches should be angled out into the field by this amount. Pleachers angled out too much make the hedge unnecessarily wide and weaken the barrier. If they are not angled out at all, they are difficult to set between the stakes, and make too thin a barrier.

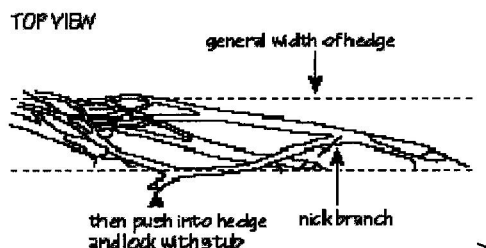


4. After every stem has been laid over, the hedger works his or her way up the stem, cutting off any branches coming forwards, making a clean cut as close to the main stems as possible. Branches going sharply upwards can be nicked and laid down.



Bends in the main stem or branches, which prevent the pleacher going into the position you want, can be nicked and then straightened into place. New shoots should arise below any nick in the stem, further thickening the hedge.

5. If part of the pleacher bulges out of line, you can cut off the twiggy end, leaving a stub which you can use to lock the branch into position.



6. After the first few pleachers have been laid, start positioning the stakes to the far side of the line of stumps, as described further below.

## Staking the pleachers

Stakes are normally of hazel, although ash or sweet chestnut can also be used. Willow is not used for stakes, as it will regrow, if knocked in the same way up that it grows. The stakes should be 5'3"-5'6" (1.6-1.7m) and must be straight and clean. Any side shoots or stubs must be cut off, or they will catch when the stake is knocked in. The thick end should be pointed to make it easier to drive in. You will need two stakes and two binders for every 1 yard (.9m) of hedge.



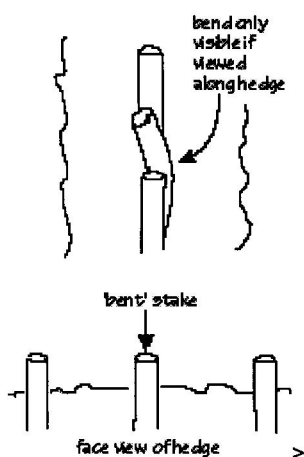
Sharpen the stake with a small axe, using a firmly positioned log as a rest. The stake should be held at an angle as shown, so it can easily be sharpened with vertical cuts. If you hold it vertically and cut at an angle, you will keep knocking the stake to one side.

In the Midlands style, the aim is to set the stakes 9-12" (225-300mm) to the field side of the stools, to give the correct finished width with the pleachers angled into the field (Chapter 9, section Cutting and laying pleachers, Laying the pleachers, 3). However, where the hedge has widened with age and the stools are not in a neat line, the line of stakes will need to be set immediately to the field side of the further stools.

1. Drive the stakes in with a mallet, mell, wooden billet or sledgehammer. The stakes should be set the way they grow, that is, thick end down. Learners need to keep being reminded of this as they tend to think that the thick end will be easier to hit with the mallet! As you position the stake, check that there are no roots or large stones to prevent you hitting it in. If you do hit something below ground, don't keep trying to knock it in, or you will only knock it out of line and loosen it. Move it a few inches and try again, but keep it in line. On a hedge that is going to be bound, don't worry about knocking the stakes fully home at this point. It is much easier and safer to do this when the binding is on, as you can then hold the binding rather than the stake you are hitting. This also allows the stakes to be adjusted if necessary, up to the time when the binding is done.
2. In the best tradition of the imperial measurement system, the spacing for stakes is given by a dimension always to hand. The 'fist to elbow' distance gives the spacing of the stakes. The finished height of the stake above the binding should be a 'fist' (see below).
3. As a guide, each stake should be put in at the point that when the next stem is laid, it passes through the stake two-thirds of the way up its own height. In practice, stems may not be that evenly spaced, and you will have to fit them as best you can whilst keeping the stakes at an even distance apart. Don't let yourself get behind with putting in the stakes, or you will find it difficult to maintain the 'build' of the hedge.



4. If a stake is bent, place it so that the 'straight' side is viewed face on. The bend will thus be hidden except to someone leaning across the hedge and looking along its length.



5. Weave the thin, whippy ends of each pleacher as far along as you can, so that each pleacher is held firmly in position with its brushy end angled out into the field. Where a stem forks into several main branches, these can be criss-crossed for a better grip on the stakes. Be sure though that most of the branches project on the field side where the brush is needed.
6. When laying the pleachers, you need to get them down low enough to leave room for the binding. Don't make the barrier too thick and bushy at the top, or you will have difficulty anchoring it with the binding.
7. If a stake goes in too far, and you can't get the pleachers down low enough, knock in another stake next to the short one, but not so far in. The short stake can then be cut up *in situ* so the pieces fall into the hedge. It is difficult to remove a secure stake without pulling the hedge apart.

### Finishing the laying

Where the hedge finishes against another hedgerow which is not ready to be laid, or against a gatepost, wall head or fence, there will be a gap above and to the right of the last pleacher in line. This is normally filled by unwanted pleachers that have been cut out of the hedge. Put suitable ones aside as you lay the hedge, and don't burn all of them immediately, or you will have nothing to finish with.

Alternatively, the gap can be filled with a live pleacher by laying back into the gap (see Chapter 10, section Laying a neglected hedge, Gaps, Laying back to fill gaps), provided there are sufficient pleachers to maintain the hedge at the required height and thickness.