

The hedgerow management cycle





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Introduction

In many ways our hedgerows resemble woodland edges. Both are rich in wildlife and contain similar scrubby species. Importantly, both are dynamic and without any management would naturally develop into lines of trees. Hedgerows are living features which inevitably change in structure over time as their component shrubs and trees age. As managers, we cannot stop a hedgerow changing through time or hold it at any given stage in its development indefinitely. Any attempt to do this will fail and cause the hedgerow to decline in physical condition and wildlife value.

To manage hedgerows successfully we must understand how we can control their natural growth and ageing patterns without subjecting them to stresses which will cause long-term damage to their physical structure. By carefully influencing the natural growth of hedgerows we can extend the period between costly management events such as hedge laying or coppicing.

This leaflet describes how to 'read' a hedgerow and to make cost-effective decisions about management that will ensure it has a healthy and long future.

The hedgerow management cycle

Many hedgerows around the country are either over managed or neglected. Typically over-managed hedgerows have been cut at the same height for so long that gaps have appeared and the stems become gnarled and twisted. Neglected hedgerows on the other hand have become so tall they have lost their shrub layer and are in danger of collapse. A hedgerow that has reached either of these extremes will need rejuvenating. Once rejuvenated we then have the opportunity to keep the hedgerow dense and healthy for many years before it is ready to be rejuvenated by laying or coppicing once more.

Incremental height increase is the key to the hedge management cycle, sympathetically allowing a hedgerow to progress slowly through its natural growth cycle without putting it under damaging stress. It also promotes a dense healthy hedgerow and extends the period between rejuvenation. Using this approach a hedgerow may take many tens of years to complete a full cycle of growth, and at all times during this remain dense, healthy and functional. For example by increasing the cutting height by 10cm every three years, it will take over 30 years for the hedgerow to gain only a metre in height.





The hedgerow management scale

This scale has been developed using a typical Midlands hawthorn-dominated hedgerow, but many aspects can safely be applied to other hedgerow types found in the UK. The scale works by using the actual physical condition of the hedgerow as the key factor in determining appropriate management. To use the scale look at the physical structure of your hedgerow, preferably during the winter, and choose which number on the scale it most closely resembles. The recommended management can be found opposite that number.

A hedgerow at point 1 on the scale is an over-trimmed, gappy and dying hedgerow. At the other end of the scale a hedgerow at point 10 is one that has turned into a line of trees. In between are all the stages of growth and condition that a hedgerow may go through. Management should aim to keep the hedgerow healthy at all times by allowing it to cycle between points 3 and 8. A healthy hedgerow is one that has frequent vigorous stems with little rotting or twisting, no gaps and dense growth close to the ground. A healthy hedgerow also offers several options for management.

1 Heavily over-trimmed with many gaps and sparse stems, their bases gnarled or rotting. May be invaded by elder, sycamore or other invasive species.

ACTION Coppice and re-plant gaps. Grub out or poison invasive species.

2 Over-trimmed, infrequent stems too far apart to be 'let up' for laying, perhaps evidence of laying in the past. Hard knuckle at trim line, shrubs developing mushroom shaped growth form.

ACTION Coppice and re-plant gaps.

3 Over-trimmed, frequent stems. Stems still healthy but require more height. Hard knuckle may be starting to form at trim line.

ACTION Allow incremental height gain at each cut or 'let up' up for laying.

4 Recently layed, coppiced, or planted hedgerow.

ACTION Trim lightly for first few years, then cut on a two or preferably three or more year rotation, allowing height to increase a little each time.

5 Healthy, dense, hedgerow with frequent stems and more than 2m in height.

ACTION Trim on a two or preferably a three or more year rotation. Raise cutting height if hard knuckle forming at trim line.

6 a) Hedgerow more than 3m high and trimmed on rotation. b) May also be non-intervention hedge, having intentionally been left un-trimmed for several years.

ACTION a) Enter hedge into non-intervention period. b) Re-shape with circular saw then return to rotational trimming or non-intervention period.

7 Hedgerow with frequent healthy stems more than 4m high.

ACTION Lay or reduce height and width with circular saw blade. Would also respond well to coppicing.

8 Mature tall hedgerow with spreading tops. Stems still healthy (although they may be infrequent) but too large (more than 18cm in diameter) for laying.

ACTION Either reduce in height and width with circular saw blade or coppice and re-plant gaps if necessary.

9 Over-mature hedgerow with tops dying back, collapse possible. Perhaps becoming dominated by tree species such as oak, ash or sycamore.

ACTION Coppice, retaining a few selected healthy trees, and plant up gaps.

10 Hedge developed into line of trees.

ACTION Manage as a line of trees, if necessary undertake selective thinning. If shrubs still exist beneath trees raise height of tree canopy to allow in more light.

Remember a hedgerow cannot be kept at one score on the scale indefinitely. A hedgerow at point 4 on the scale would, if trimmed continuously at the same height, eventually decline to point 1. Alternatively, if not managed at all it would progress over time to point 8 or beyond.

Types of management



Trimming

Used sympathetically cutting with a flail can maintain a thick dense hedgerow for many years. However, annual cutting back to the same point will over a period of years lead to severe damage to the hedgerow. Fortunately there are alternatives. Cutting every two or preferably three years allows the hedgerow to develop the second and third year growth necessary for shrubs to flower and fruit. Combined with incrementally raising the cutting height, such rotational cutting will avoid putting undue stress on the hedgerow and keep it healthy. Whatever trimming regime is followed at some point the hedgerow will need to be rejuvenated at the base and the cycle of healthy growth re-started.



Re-shaping

A practical and flexible alternative to the flail is the circular saw blade (*top left*) which can cut cleanly through much larger material (*middle left*) than the flail (*bottom left*). It is especially useful to re-shape overgrown hedgerows which have not been cut for many years, or to manage hedgerows on a much longer cutting rotation than is possible with flail mowers, perhaps just once every 10 years. The brash that results is relatively straight forward to pick up with a front loader.

Laying

Once common practice on nearly all farms, hedge laying involves partially cutting through each stem then laying them over and weaving them together to produce a thick living barrier, which re-grows from the base (*right*). Once rejuvenated in this way, a hedgerow can be kept dense and healthy for many years by sympathetic cutting before being allowed to grow up to be layed once more. A hedgerow needs to be at least 3m and preferably 4m high to be layed.

Coppicing

Coppicing (*bottom right*) involves cutting stems to ground level and allowing the stools to re-grow. It is a particularly useful management technique if a hedgerow is ready for rejuvenation but has too few stems or they are too large or rotten. It is also useful for very wide hedgerows. If the re-growth is protected from grazing by deer and livestock, a thick dense hedgerow can be recreated in this way in just a few years. It also gives the opportunity to plant up any gaps. Effectively any hedgerow can be coppiced but single species hawthorn hedgerows with old, large diameter stems showing signs of rot can respond poorly.



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Example cycles



Example one

Here we look at two hedgerows, one at either end of the management scale. The hedgerow at point 1 on the scale (*above*) is an over-trimmed hedgerow with typically mushroom shaped bushes, while the hedgerow at point 9 (*below*) has been neglected for many years. Neither of these hedgerows can be layed successfully. Even if the first hedgerow is allowed to grow up it will have too few stems, while the second one has stems that are not only too far apart but also too large to be layed. In both examples coppicing is the only management option available, and one which also allows gaps to be planted up.





Following coppicing most hedgerows will have re-grown well after only two growing seasons (*above*). Regular light trimming for the first few years will help to thicken them but from then on cutting once every 3 years will allow the hedgerow to produce fruit and provide good wildlife habitat.

Be aware that if a hedgerow is cut back to the same height repeatedly, after some years a hard knuckle (*right*) will start to form at that height. Once you spot this it is time to raise the cutting height at each cut (*below*), otherwise the hedgerow will degenerate and once more drastic intervention will be necessary.



Example cycles

Example two

This hedgerow, at point 3 on the scale (*below*), is over-trimmed but crucially still has many stems. If we allow the hedgerow to increase in height, gradually its condition and habitat value will improve. The shrubs, while still being kept in check, will be released from the stress that ultimately threatens to kill them. The hedge can then be layed when tall enough, or coppiced, without the need for new planting.

If you wish to lay the hedgerow fairly soon, then one option is to trim only its sides allowing the top to grow up unhindered. Otherwise cut the top as well as the sides, raising the height of the flail by 10-15cm at each cut, so buying time before you have to go to the expense of laying or coppicing.



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Example three

This hedgerow, at point 6 on the scale (*above*), has been left untouched for 10 years, partly to save money on cutting. During this time it has flowered and fruited heavily and its dense growth has provided excellent habitat for wildlife. Re-shaping this hedgerow with a tractor-mounted circular saw attachment is a cost-effective and efficient option, cutting the sides first then the top. The cut brash should fall clear of the hedgerow so it can be pushed up into a pile with a front loader and burnt. The hedgerow can then either once more be left to its own devices for some years or it can be cut on rotation, gradually raising the cutting height, until it is ready to be rejuvenated by laying or coppicing.

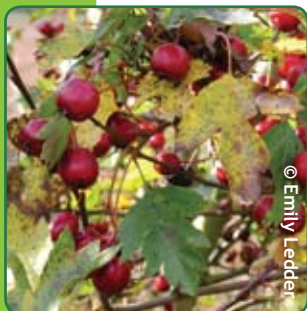
Once again the aim is to slow down the natural development of the hedgerow before rejuvenation at the base takes place, either by laying or coppicing. However, if you do re-shape a hedgerow don't make the mistake of then cutting it to the same height for so long that it becomes stressed and begins to slide down the scale.

Further information

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The DVD '*A cut above the rest: managing hedges for the future*' looks closely at the options available for management and explores the life-cycle concept in detail.

Three leaflets accompany this film, one dealing with hedgerow cutting (NE36), another with hedgerow planting (NE70) and the third with hedgerow trees (NE69). Each is designed to help managers make sound decisions about how to manage their hedgerows. The leaflets can be viewed and downloaded from the Hedgelinek website www.hedgelinek.org.uk, where extracts from the DVD can be seen too.

The DVD and hard copies of the leaflets are available from **Natural England Enquiry Service**
0845 600 3078
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