Hedgerows in the Kent Downs landscape

Hedgerows create an intimate feel to the landscape of the downs and provide valuable habitats for wildlife. They were originally planted to contain livestock and formed boundaries before the introduction of fencing. They can also develop from woodland edge. The way the land is managed and used has shaped their appearance. Different soil conditions, climate and altitude all have an effect on hedgerows.

In other areas of the downs, for example on the Romney Marshes, hedges are historically absent, giving the landscape a much more open feel with a sense of space and wilderness.

These information sheets will help you to maintain and enhance the hedgerows in your area of the Kent Downs.

Types of hedge

The 'traditional' hedge

This type of hedge is commonly used to mark field boundary. Where livestock such as sheep are present, it may also provide a barrier sufficient to prevent their escape. A healthy traditional hedge may vary in height considerably and can be anything from 1m to 2m. It comprises of between one and up to as many as fifteen native species of plant, but is often dominated by hawthorn.

The shelter hedge

This type of hedge is grown in areas where strong winds would otherwise damage valuable crops. In Kent, this type of hedge is primarily used for the protection of fruit and hop plants. Tree species grown are typically large-leaved, such as beech, poplar or alder, planted in single lines and allowed to grow on to 3m to 4m (10ft to 13ft) tall.

The Shaw

These large-scale hedgerows (effectively narrow woodland strips of mature trees) are a characteristic feature on the downs. These shaws contribute to a strong separation between the slope and the more open agricultural slope immediately to the south. Replacing these features with small narrow hedges can seem 'fussy', out of character and can disrupt the wider landscape.

The screening or privacy hedge

This type of management practice has sprung up in the last couple of years as a means of screening recent modern developments. The use of non-native species, such as the Leyland cypress and other introduced evergreens, in a rural area looks very unnatural in the landscape and can a have a negative impact on wildlife, and is therefore inappropriate.

Traditional hedge

Shelter hedge

Woodland shaw

Non-native screening or privacy hedge

Caring for and maintaining your hedgerow

Each of these types of hedgerow requires a different type of management to maintain its health, vigour and appearance. The next few pages show how to look after each type.

Suggested management techniques in arable areas

Mechanical trimming

- Usually sufficient to maintain hedge in good condition, providing you adhere to the guidelines given.

Coppicing

- When hedge is losing vigour, with gaps appearing and shape lost, it is recommended that the hedge be coppiced.
- Appropriate option when stock does not need to be contained.

But

- The exception is, for instance, with roadside hedges where a barrier needs to be maintained to prevent illegal access. In this cases, temporary fencing can be installed, or laying of the hedge considered (see below). Following this, mechanical trimming can be resumed.

Suggested management techniques in pasture areas

Mechanical trimming

- Usually sufficient to maintain hedge in good condition, provided you adhere to the guidelines given.

Laying

- When hedge is losing vigour, with gaps appearing and shape lost, it is recommended that the hedge be laid.

Coppicing

- If laying is rejected for reasons mentioned above, then coppicing can be considered, particularly if a stock-proof fence already exists.

Management of a 'traditional' hedgerow

How do I manage a traditional hedge?

Traditional or boundary hedgerows require maintenance if the hedge plants are not to eventually grow into trees and lose their effectiveness as a stock-proof barrier and a valuable wildlife habitat. There are four types of hedgerow management: machine trimming, hand trimming, coppicing and laying.

Machine trimming

Using the flail cutter
The practice of flailing a hedge is now very common, being quick and cost effective. Careful machine trimming encourages bushy, branching growth, that helps to form a dense barrier. However, if done unsympathetically it can be detrimental to the hedge.

The tractor-mounted flail is a powerful machine capable of grinding through sizeable stems. However, it is most effective on small diameter stems up to 25mm. Although larger stems may well be within the machine's stated capacity, it often causes the stems to shatter and split. This causes ugly scarring and damages the plant, so its life span and growth is greatly reduced. This can also arise because the job has been rushed and the machine pushed through the material too quickly.

What shape should the hedge be cut to?
After continued trimming, hedgerows will inevitably start to thin at the base, lose their attractive appearance and ability to retain stock. Trimming to an A shape can help prevent this effect. The A-shaped hedge encourages growth from the base and maintains the life of the hedge. In the AONB a topped 'A', which can look more natural akin to the traditional box-shaped hedge, is recommended.

The 'A' shaped hedge

The topped 'A' hedge

When and how often should it be cut?
Ideally, the hedge should be cut during the winter months when it is not actively growing, to ensure disturbance to wildlife is kept to a minimum. Cutting in January and February allows any fruit to remain available for wildlife until December. The hedge should not be cut between 1st March and 1st September (Section 1 of the Wildlife and Countryside Act 1981), as it is an offence to intentionally damage or destroy the nest of any wild bird whilst it is being used or built. Similarly, under the Hedgerows Regulations Act, 1997, it is a criminal offence to remove a hedgerow without permission.

It is recommended that the hedge is cut on a rotational basis once every two to three years rather than every year. This creates a more natural-looking hedge and adds more cover for wildlife. Similarly, the hedge should not be cut back to the same point every time - particularly if it is flailed. The cutter bar should be raised a few centimetres on each cut, then pruned back hard to the original starting point the third time round. This prevents unsightly scarring of the stems and encourages better, stronger, denser growth.

How do I get access to machinery and users?
Most farmers have their own equipment. If you own only a small section of hedge, a friendly chat with a farming neighbour may result in them cutting your section for you. Alternatively, machinery rings such as RAMSAK are often a simple way to source a suitable contractor. See Contacts.

Other, less often used, machinery
Shapesaw or sawhead cutter consists of a circular blade mounted on a tractor arm, used primarily for heavy cutting work - including coppicing. It gives a cleaner cut than the tractor-mounted flail, but does tend to take slightly longer to complete the work.

Reciprocating cutter-bar, which gives a clean finish but the teeth can break quite easily and, therefore, should only be used on smaller stems.

Hand-trimming

Trimming your hedge with hand tools is only practicable if the hedgerow is short in length or inaccessible to machinery. Petrol-powered, hand-held cutters are available, but are primarily designed for light duties and will not be able to cut through thick stems. If this is the only way to manage the hedge, it will probably require cutting once every two years. However, care should be taken not to over-tidy and create a manicured smooth-profiled hedge. Otherwise, all advice given for machine trimming applies to hand-trimming.

Coppicing

Not all hedges need regular cutting; where crop-shading isn't a problem, free-growing hedges can be allowed to develop and then coppiced on rotation. This provides good habitat for a variety of wildlife. This technique can also be used when the hedge had gone past the optimum state for laying. It is more cost effective and requires less expertise compared to laying.

Coppicing involves cutting trees and shrubs down to a few centimetres above ground level. Although dramatic in initial effect, it is one of the most effective and cheapest ways of rejuvenating a deteriorating hedgerow. Coppicing encourages low growth from the tree or shrub, and is only required every 10 to 15 years (or longer if combined with machine trimming). Cut stems should be severed no more than 5 - 10 centimetres above the ground. This ensures that new shoots sprout directly from the base, ensuring the hedge remains bushy where it is required most. It also allows for easy "gapping up".

As the visual effect of coppicing is so dramatic, and is temporarily detrimental to wildlife, it is recommended that the practice be staggered over a number of years. If a large stretch of hedgerow requires coppicing, then no more than a 100 - 150m stretch should be tackled in one year. This allows you to turn what may once have been a daunting task into a more manageable operation. The cost of coppicing is comparable to machine trimming when taken over several years and, compared to laying, requires less specialist skill.

Once the plants have grown back, other types of management can be introduced:

- The hedge can be machine trimmed,
- Allowed to grow on.
- Allowed to grow on, laid, and then trimmed.
- Alternatively, just coppiced on rotation.

Hedgelaying

Hedgelaying is a skilled operation used to manage and rejuvenate hedgerows required for stock retention, and therefore more commonly practiced on pasture than arable farmland. Traditionally, hedgelaying was very labour intensive and time-consuming. Even today, this practice is relatively costly and requires specialist contractors.

Hedgelaying involves partially severing the main stem (or pleacher) at the base and bending it over at an angle of around 35 degrees. These are secured in position by weaving between stakes and binding with hazel. The pleachers usually remain alive for several years, but are replaced by new growth sprouted from the base of the cut stump, to form a thick, healthy and stockproof hedge. This process can be repeated every 15-20 years. However, as with coppicing, the rotation period can be extended by use of sympathetic machine trimming.
Is my hedge suitable for laying?

The optimum time to lay a hedge is when the stems reach 5cm – 10cm diameter, and are no more than 2.5 – 3.6m high. Laying when individual plants are larger than this is possible, but may be more expensive (because it is harder) and optimum results cannot be guaranteed. In these cases, coppicing should be considered. Hedgelaying should be carried out during the winter months once the sap has fallen, between late September and the end of February. A hedge should not be laid or coppiced during the time of vigorous growth in spring and early summer when long-term damage to the hedge is likely.

Styles of hedgelaying
Traditionally, many different regional and local styles existed throughout the UK, with two commonly used in Kent, namely the Midland style and the South of England style. Either can be used and is often dependent on which contractors are available.

Generally speaking, the Midland style is used when there is no stock in adjacent fields, or stock is only on one side of the hedge.

The South of England style is used when stock will be placed in fields on both sides of the hedge. For more information on hedgelaying styles and lists of contractors, contact the National Hedgelaying Society at www.hedgelaying.org.uk

Hedgelaying maintains a stockproof barrier whilst rejuvenating the hedge.

Maintenance of hedgerows

How to deal with a problem hedge

The leggy sheep hedge

- **Cause** Sheep grazing off low growth on plants.
- **Problem** Not stockproof and unattractive
- **Solution** Fence off with stock netting (galvanised steel wire fencing designed to prevent stock from escaping).
  Coppice all the hedge plants and plant up with appropriate species (see section on species selection). If a large length of hedgerow needs restoring, then coppicing over several years should be considered. This provides a habitat for wildlife while the hedgerow is regrowing in the initial years and does not have such a landscape impact.

The T-shaped hedge

- **Cause** Overflailed, particularly from above. Commonly seen in arable areas of the AONB to prevent hedges from shading crops.
- **Problem** Not stockproof and causes die back.
- **Solution** Coppice and plant up if required (over several years if over a large length). If stock is present in field, treat as a leggy 'sheep' hedge.

The overgrown hedge

- **Cause** Lack of any management.
- **Problem** shading of adjacent crops, no longer stockproof. Individual trees tend to dominate.
- **Solution** Consider if a shaw is more appropriate here. If so, leave to grow on. Otherwise, easiest (and cheapest) solution is coppicing to encourage low, bushy growth. Once matured, introduce trimming as described earlier. Laying may be possible, depending on the skill of the craftsman. Gaps may become evident, and can be planted up if required (see section on species selection).

The gappy hedge

- **Cause** Inappropriate management.
- **Problem** Not stockproof, large sections lost resulting in a lack of connectivity.
- **Solution** Plant up gaps with appropriate species and introduce the most appropriate management (see section on species selection). If adjacent hedgerow sections are tall, consider coppicing back a metre or so each side to avoid shading out the new planting.

The treeless hedge

- **Cause** Dominance of flailing, particularly in arable areas.
- **Problem** Loss of important landscape features and songposts for birds.
- **Solution** Identify suitable trees to allow to grow (e.g. field maple, beech) and mark with coloured tape to ensure that they can be seen by the flail operator.
  Alternatively, plant new trees away from hedge to avoid flail. Ensure that these trees are well-spaced at irregular intervals to ensure a 'natural' appearance

The alien hedge

- **Cause** Inappropriate, non-native or invasive species.
- **Problem** Native species but inappropriate to the geology, soil type and landscape character e.g. alder on open chalk, non-native or inappropriate species planted.
- **Solution** Seriously consider felling and replanting with a hedge consisting of species native to the Landscape Character Area (see section on species selection).
  If retention of privacy is important, consider planting a native hedgerow alongside the existing hedge that can be felled when the new hedge has matured. Bear in mind, though, that planting too close may cause the new hedge to fail due to lack of water and light.

Hedge margins

The grass margins along a hedge are an important part of the hedgerow habitat supporting an abundance of wildlife. To keep this good habitat, it is important to avoid drift from farm operations, such as fertiliser applications, and protect the hedge from grazing animals.

Planting a new hedge

Hedge planting is a positive undertaking but bear in mind hedgerows are not prevalent in all of the downs. In some parts of the downs, the landscape is valued for its large, open valley floors where the planting of a hedge can actually have a negative effect on the landscape. Where possible, planting should follow historic field boundaries/hedge lines. The information below, combined with the Landscape Design Handbook (www.kentdowns.org.uk) will provide you with the basics for hedge planting in your area. If in doubt, please contact your local Countryside Management Project (CMP) for advice.

Selecting the right species for your hedge

Whether you are planting a new hedge or gapping up (filling in gaps in an existing hedge) it is important to plant the right species. This not only maintains the landscape character, but also increases the likelihood of the new plants surviving and creating a good hedge. Commonly, a large proportion is hawthorn (>40%) for rigidity and strength but a wide variety can be used.

As an alternative to a mixed hedge, hedges can be 100% hawthorn, as would have been done historically. Over time, additional species will gradually become established, guaranteeing a true representative hedge of the area.

Hedge plants should be of native origin (i.e. grow naturally in this country) and of local provenance (from seed collected in the UK, and ideally from within Kent). This has several advantages, including improved growth, a greater chance of survival, and protection of the local environment by maintaining the link between wildlife and the trees on which they rely. Buy bare-root whips (60-90cm or 2-3ft in height) as these give the greatest likelihood of success.

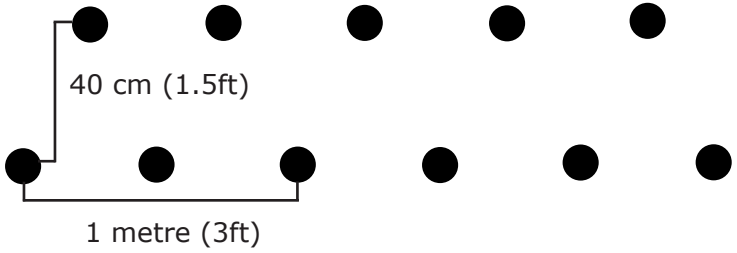
Shrub and tree species for planting hedges

Common name	Latin name	Planted as single trees	Gault clay	Chalk	Valley bottom	Greensand
Shrubs 3-15m						
Alder buckthorn	Frangula alnus				●	
Blackthorn	Prunus spinosa		●	●	●	●
Buckthorn*	Rhamus carthartica		●		●	
Bullace	Prunus domestica var.		●			
Dogwood	Cornus sanguinea		●		●	●
Wild Roses	Rosa – canina, arvensis, rubiginosa		●	●	●	
Guelder-rose*	Viburnum opulus		●		●	
Hawthorn	Crataegus monogyna		●	●	●	●
Hazel	Corylus avellana		●	●		●
Wild privet*	Ligustrum vulgare				●	
Spindle*	Euonymus europaeus		●		●	
Wayfaring tree*	Viburnum lantana		●			
Trees 15m+						
Holly	Ilex aquifolium		●	●	●	●
Hornbeam	Carpinus betulus		●	●		●
Wild cherry	Prunus avium	●		●	●	
Crab apple	Malus sylvestris	●	●	●	●	
Field maple	Acer campestre	●	●	●		●
English oak	Quercus robur & Q. petraea	●			●	●
Whitebeam	Sorbus aria*	●		●		●

* These species either have an open habit or have weak growth and are therefore best left out of stockproof hedges.
Use only plants of local provenance.

Planting your hedge

Contractors are available to undertake hedge planting. However, short sections can be quite easily carried out yourself. Planting can be undertaken any time during the winter once nursery stock becomes available (October to early March), but not during frost or icy conditions. The ideal time is as soon as possible after leaf-all in October or November. For the traditional hedge, a planting rate of 5-6 plants per metre is recommended, planted in a double staggered row as shown in the diagram. The two rows should be approximately 40cm (15”) apart. Ideally, soil conditions should break down easily and have high organic matter content. If the soil is poor quality, then a soil improver such as well-rotted horse manure can be used. However, provided the right hedge mixture has been chosen, and the soil is not of very poor quality, this will not be needed. With mixed species hedges, plant in groups of four or five of each species to ensure a more natural appearance.



Getting started . . .
The ideal method for hedge planting is to dig a trench. First remove any turf, as this will compete with the hedge for moisture, nutrients and light. Ensure that the trench is at least 50cm wide and deep enough to accommodate the roots. In addition, loosen the soil deeper than this to allow the roots to grow. Place the hedge plants in the appropriate position and spread the roots (long roots can be trimmed and this encourages new growth). Replace the soil around the roots (mixed with improver if required) and gently compact with the heel of your boot.

Quick planting . . .
Alternatively, after the removal of turf, the hedge plants can be planted into slots created by inserting a spade twice to create a 'T' shape. This method is considerably quicker, but may restrict early growth of the hedge with more dying in the first year.

Should I mulch and protect my hedge?
Mulching involves laying a material (organic or artificial) to suppress the growth of competitive weeds during the summer. Well-rotted compost or bark chip can be used, but fresh material should be avoided. It should be laid to a depth of at least 10cm to be effective. Alternatively, plastic mulch sheeting can be used, and is available from hedging suppliers. This should be left in place for at least three years, as it tends to deter surface rooting in the early years. One other method of weed suppression is available in the form of chemical control. This should only be used when the two manual methods have been ruled out. Chemical control should only be done in the first two years after planting, as it can suppress important hedgerow flowers and over time actually benefit resistant weed species.

Hedge protection in the form of tree shelters or tubes should be used if there is a risk of damage from grazing animals. Spiral guards and short 'quills' will prevent grazing by rabbits and are available from tree suppliers. If grazing from larger animals, such as deer, is a problem then protective fencing along the whole length should be considered, and will be a necessity if stock such as sheep are present in the adjacent field.

A suggested distance for stock fencing is 1m from the final width of the hedge. This prevents the browsing of the hedge and allows for a buffer strip.

Should I carry out any management in the first few years?
Assuming that the hedge is kept weed-free in the first few years, there are still some operations that can be carried out to ensure that your hedge remains healthy:

Plant up any gaps
No matter how well you plant your hedge, some gaps will form where individual plants die back. These should be replaced as soon as possible during the following winter, having assessed the reasons the original plants may have died (inappropriate species, poor soil condition, weed competition, etc).

Watering
Until their roots extend deep enough, young hedgerows may need watering during very hot and dry periods. Hedgerows too far from a water supply may require the use of a portable bowser pulled by a tractor. A local farmer may be able to help you, or contact RAMSAK (see Contacts).

Trimming
Careful trimming in the first two to three years can help to develop a healthy and attractive hedge. Following the first year's growth, trim back to about 15cm above ground level. This will encourage bushy, multi-stemmed growth. In the following two years, the plants can be cut back slightly to again encourage stems to produce new shoots. After these first three years, management can revert to those techniques outline in earlier sections.