

**The management of golf course boundaries is a frequent thorny subject for the Course Manager. Tree and Woodland Consultant Eamonn Wall has been advising golf courses for many years on the planning and planting of hedgerows which offer the golf course both screening and areas for wildlife conservation. He now outlines the benefits of careful planning.**

# Hedge your bets



Since the 1960s about one fifth of Britain's 800,000 kilometres of hedges have been removed as farming became more extensive and fencing replaced hedgerows as they deteriorated. The impact of hedgerow removal on the appearance of the countryside aroused widespread criticism from a public largely ignorant of agricultural needs but attached to a traditional view of the landscape. Yet, in some parts of the country the network of hedges was planted in the 18th Century and so is quite recent. Other hedges are much older, and some can be traced back to Saxon times.

Hedges owe their existence to a number of utilitarian reasons, to contain stock, mark ownership of boundaries and to provide shelter for farm animals and game. Hedges have come to be regarded as a valuable part of our heritage and their importance for wildlife conservation is very high. As woodlands were removed from the countryside its wildlife still flourished on farmland in the small copses and hedgerows that remained. The mixture of shrub species and grassy verges associated with hedges provides ideal habitats for all kinds of wildlife from wild flowers to mammals and birds.

Hedges are often the only permanent vegetation on farmland, in contrast to fields which are regularly cropped and cleared. This stability helps to sustain wild plants and animals on farmland and provide conservation corridors linking small woodlands. Very old hedges can have an average of ten shrub species every 30 metres and in general an old hedge will have one species for every 100 years of its existence.

Almost all the main groups of wildlife can be found in hedgerows including woodland birds for nesting, mammals and butterflies. Partridge is partly dependent on hedgerow bot-

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toms and verges for cover, nest sites and the great variety of plants and insects which provide food for parent bird and chick.

These conservation and landscape enhancement benefits of hedges on farms and golf courses has prompted most land use organisations to encourage their planting and management by providing grant aid, currently via Countryside Stewardship and Local Authority Schemes. Of course, the benefits of hedges to farmers and golf courses also include screening of buildings for

security and amenity, the provision of shelter for members, habitats for sporting and game cover and the prevention of trespassers onto the golf course.

As with all tree planting, the establishment of new hedgerows requires some careful planning in order to ensure success. Items to consider include soils, existing ground vegetation and general condition of ground along the proposed line, protection requirements from stock and/or mammal pests (rabbits, hare, deer, voles) tree and shrub species growing locally and weeding requirements. After three to four years when the hedge plants are established the long term management will have to be considered.

Once you have decided upon the line of your proposed hedge it is important to establish the soil type to enable the correct choice of tree and shrub species. Also, the lines of many new hedgerows are often along old dykes and these surface stones need removal.

The choice of tree and shrub species will depend on the location and also on whether you would like to have a few taller trees to grow above the main hedge trees. Generally speaking hedges near farm buildings and houses are of beech and hedges out in the countryside are hawthorn dominated. Beech hedges are often planted pure whilst hawthorn hedges are usually planted in mixture with smaller quantities of blackthorn, hazel, holly, dogwood and dog rose. If the hedge is going to be allowed to grow tall, then some tree species such as rowan, cherry, crab apple, elm (for isolated areas in the West) can be included. Oak, ash, beech, birch, lime, chestnut are suitable as individual hedgerow trees. Native species are usually encouraged but one non-native to Scotland ideal for hedges is field maple common in English hedgerows.

Normal practice is to plant two staggered rows, 30cm between the rows and 30cm between the plants along the rows (7 plants/m). Minor species would be planted first in random groups occupying 1 to 2m and the main species say of hawthorn accounting for 75%-80% of the hedge would then be planted. When

including some wild rose such as dog rose these should be sprinkled along the line in small groups of two or three plants. Traditionally one year old plants about 20-40cm in height were used but where weed competition will be strong two-year-old 40-60cm plants are usually preferable. Individual hedgerow trees should be 60-90cm in height to aid their growth and keep them above the general height of the hedge, often planted in guards for identification.

The best way to protect a hedge is to erect a stock fence on either side and where rabbits are a pest, attach rabbit proof mesh to the fence with the bottom 15cm turned out into the field and pegged down. However where stock are not an issue as on an arable unit, the hedge could be planted bare if no rabbit/hare pests exist or where they do, a simple temporary rabbit fence with posts at 10m spacing could be erected. Otherwise individual guards could be used, though often expensive, unsightly and require eventual removal.

Weed competition can kill young hedging plants or at the very least considerably slow growth rates. To achieve successful, cost effective establishment of hedges, weed control is essential. Many people begin to think about controlling weeds in the spring after the hedge has been planted but the correct time to decide on a control strategy is in the summer prior to planting.

Pre-planting control can serve two purposes. Firstly, removing thick weed growth especially dense grass swards can make planting easier. Secondly, killing or removing weed cover will reduce competition during the early part of the first growing season at the very least. Mowing or strimming hedgelines prior to planting will serve the first purpose but further control of the weeds remaining will usually be required.

This could be achieved at the pre-planting stage by a strip application of a broad range herbicide such as Roundup (glyphosate). Ploughing will create an ideal planting site which is likely to be weed free well into the first growing season. However this will also provide an ideal seed bed for thistles, nettles and other broadleaves weeds that can cause problems later.





Post-planting control. Strimming or mowing weeds alongside a hedgeline can have little effect and may even be detrimental. Weeds not only compete above the ground for light but also below the ground for water and nutrients. Strimming weeds, especially grasses, may stimulate them to grow faster and compete more vigorously.

Physical methods of suppressing weeds such as mulch mats and bark chip mulch are generally very expensive. Mulch mats can often blow away on soft exposed sites and weeds may grow through the slits cut in the mat for the trees, necessitating some degree of chemical control. On certain sites plastic mulch mat in continuous rolls with the trees planted through can be successful but they usually require eventual removal and can harbour voles who strip bark off the hedge plants.

Herbicides approved for use on broadleaved trees and hedges cannot generally be applied directly over the

young plants in the summer when they are in leaf so ideally an appropriate herbicide with residual action should be applied along the hedgeline in the winter. Each herbicide will have its own range of susceptible target weeds but the herbicides used most frequently for winter applications are:

■ **Kerb granules or Kerb flo (propyzamide).** Provides effective control against a wide range of grasses.

■ **Stomp (pendimethalin).** Controls a range of annual grasses and some broadleaved weeds including cleavers. Can be applied in a tank mix with Kerb flo.

■ **Flowable Atrazine (atrazine).** Controls a range of grasses and some broadleaved weeds. However, Altrazine has doubtful environmental credentials and should never be applied near to water or where run off could occur. As with all chemicals take time to study its label.

During the first three to five growing seasons after planting further control may be required in the summer to deal with weed species not

affected by the previous winter's herbicide application or re-invading weeds. For the first two seasons after planting, there is little option but to apply Roundup to a strip along each side of the hedge taking care not to let the chemical come into contact with the hedging plants themselves. This may leave weeds such as thistles, nettles and willowherb in among the hedge and if these need to be removed the only option is to carefully pull them out by hand. However, once the hedging plants are 2-years-old they can be treated with an overall winter application of Caseron G granules (dichlobenil). The chemical is expensive but hawthorn and most other tree species are tolerant whilst a very wide range of weeds, including thistles and nettles, are killed. It does an excellent job.

The long term management of hedges depends on whether they are treated as shelterbelts and allowed to grow freely or as traditional tightly cut hedgerows. When the latter, it is

recommended to cut in rotation every third year or longer so that there are flowers for the pollinators followed by berries and seeds for the birds. An 'A' shape is best for wildlife five to six feet high and eight foot through the bottom. Cutting should not take place during the nesting season (April - July).

Hedges thus provide many benefits and with careful planning their establishment can be fairly straightforward.

New planting combined with the restoration of old hedgerows by coppicing or laying can greatly increase the amenity, wildlife and conservation value of a property. Happy planting this winter.

Eamonn Wall is a tree and woodland consultant and director with the nationwide tree planting and woodland management business of Eamonn Wall and Co. who specialise in the design and management of trees on golf courses. Tel: 01259 743212.