



# Hedgerows- management specifications

## Planting

### Care of plants

Hedge plants should be planted out as soon as possible after delivery. If this is not possible then they will need to be heeled in. This involves placing the roots in a pit or trench and covering with firmed soil to prevent them drying out, freezing or being exposed to sunlight. Heeled in trees are best located in sheltered area away from direct sunlight and out of the wind.

When planting it is important to keep the plants in a plastic bag to prevent drying out and exposure to light. It is essential that the roots are kept moist and dark as even a brief period of exposure could damage the plants. If planting on a warmer day, it can be helpful to dunk the roots in water prior to putting them in the bag, however it is important to not keep them in the water for an extended period, as this can damage the roots.

Hedge plants should be 40-60 cm transplants of British provenance (preferably local) and should comply to British Standard 3936.

### Species

All hedge plants should be native species. We recommend 75% of the hedge be hawthorn/blackthorn to ensure the boundary is stock proof. The remaining 25% should be a mix of 4-5 other appropriate hedgerow species. Ideally plant this 25% into groups of the same species rather than individually to avoid species outcompeting each other. See appendix 1. for a list of species.

If there are existing hedgerows adjacent to the existing use the species present in these to select suitable species to plant.

### Planting

Planting should be carried out between October and March. Autumn planting is preferable as it usually results in better establishment, due to plants being dormant. No planting should be done in very wet, frosty, or snowy conditions.

If replanting an old hedge line with a bank, the planting should follow the top of the bank. Efforts should be made to ensure the new hedge follows the former hedge line, where one existed and can be identified. Otherwise, it should be in accordance with the hedgerow pattern of the immediate area.

Planting can be carried out in 2 main ways:

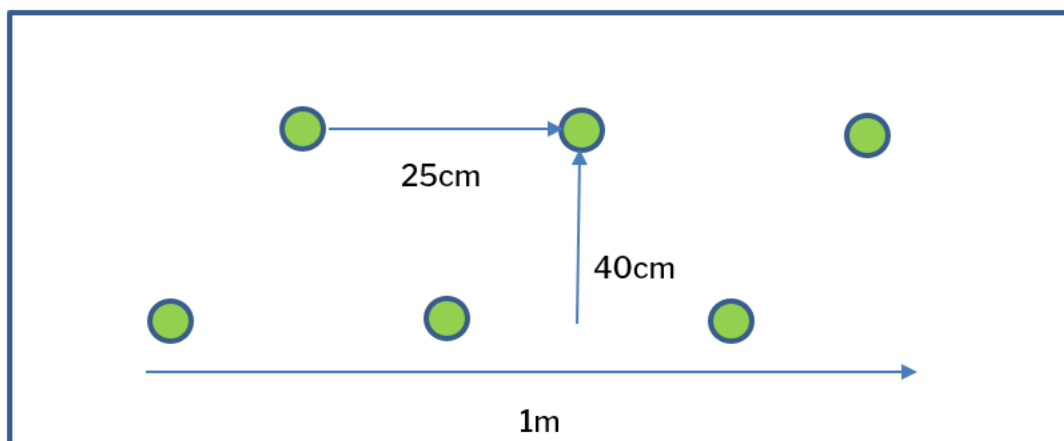
- i) In a cultivated strip, approximately 60 cm (2 ft) wide by 25 cm (10 inches) deep
- ii) Cutting a slit in the ground and holding it open with a spade whilst the roots of the plant are carefully inserted and spread downwards.

The plants should be set in at the same depth as they were in the nursery and the soil must be firmed well in around the roots.

A double staggered row of plants produces a dense solid hedge with suitable stems for laying. This method uses 6 plants per metre (5 plants per yard), in two rows about 40cm (16 inches) apart (see diagram below). Individual trees in each row should be about 25cm apart. Damaged or dead saplings should be removed during planting.

## Trees

Hedgerow trees, such as oak and crab apple, increase the landscape and wildlife value of a hedge. Trees should be planted in tree shelters for protection and increased visibility so they can be easily avoided during hedge trimming. It is important to note that not all sites are suitable for hedgerow trees. These tend to be areas with high numbers of waders and ground dwelling birds as planted trees can provide perches for predators. Please contact the North York Moors National Park for guidance on this.



## Hedge Guards

Hedge guards are used to protect plants from voles and rabbits and may be used where rabbit netting is impractical. It is important to establish the hedge guards firmly in the ground using a stake or cane as they are otherwise liable to blow over in strong winds. When installing the guards ensure that the stake does not damage the roots when pushed into the ground. Guards will need to be checked periodically to ensure that they have not fallen over. There are a variety of plastic and non-plastic guards on the market these days. It is worth checking if and where the guards can be disposed of, to ensure they can be removed when the hedge is established.

## Fencing

Protective fencing will be required to protect the new growth from livestock and, where appropriate, rabbits and hares. There should be a minimum of 1m left on either side of the planting.

## Aftercare

For the first few years the hedgerow plants should be kept free of weeds. Weed control and moisture conservation can also be achieved with the use of a mulching with bark chippings, straw, or sheep's wool. Weeding is critical to the quick establishment of hedgerows by limiting the number of plants the hedge plants must compete with. Avoid using mechanical means, such as strimming, when working close to the trees, as there is risk of damaging the young trees.

## Laying

In the North York Moors hedges have been traditionally managed by laying every 10-20 years to stockproof and regenerate them. If hedges are not managed, then the hedgerow is likely to deteriorate into a line of trees, with no shrub layer. However, continual annual trimming over an extended period can also lead to deterioration, through gaps, hollow bottoms and die back. It is therefore recommended that hedges are managed through a combination of carefully timed, gradually increasing cuts and laying.

### (i) Timing and Weather Conditions

Hedge laying is usually done between October and March. In upland areas, laying is often done after mid-February to avoid the risk of hard frosts.

The leaves on the hedgerow should have started to 'turn' before work begins and it is best to stop when the buds start to burst in the Spring.

Avoid laying a hedge during or soon before a hard frost as stems become brittle and frost can damage plants with fresh cuts. Older stems are most susceptible to frost.

### (ii) Preliminary Management

'Siding-up' may be necessary before laying. This involves side trimming of the hedge for 2-3 years before laying to produce strong leading shoots and an overall hedge height of 2-3 m (8-12').

All old fencing material, dead wood, bramble, rose and elder present in the hedge should be removed before laying.

### (iii) Method of Laying

Each pleacher (the living stem) should be cut 2.5-10 cm (1-4") above ground level. The actual height of cut will vary depending on the thickness of the stem.

The 'hinge' should be left as thick as practical so nutrients can reach the pleacher whilst allowing it to be laid over without back splitting.

Both the Yorkshire method (where the pleachers are laid close to the ground) and the Midland method (where the pleachers are laid at 25°- 45°) are acceptable.

Generally, pleachers should be laid up the slope on inclines. Under most circumstances pleachers should be laid in one direction only but laying both ways is acceptable where there are gaps. Small gaps, less than 1 m, can be filled with trimming as dead wood provides a valuable wildlife habitat. The laid pleachers should be interwoven through stakes placed at approximately 1 m intervals. Stakes should be 4–5 cm (1½–2") in diameter.

#### (iv) After Laying

Any gaps left after laying should be planted up with young plants (see Specifications for Hedge Planting). Select species that are already present in the hedgerow.

Protective fencing will be required to protect the new growth from livestock. There should be a minimum of 1m left on either side of the laying and planting (see Specifications for Stockproof Fencing).

## Coppicing

Coppicing rejuvenates mature plants. This method is best used where the hedge is too large or too low to lay or if there is a lot of dead wood in the stems of the hedge.

#### (i) Timing and Weather Conditions

Coppicing should be carried out in the winter months during spells of mild weather.

#### (ii) Method

All stems should be trimmed by a clean-angled cut to a desired height (around 7.5 cm (3") from ground level) and angled to shed water. If the hedge plants are of a large size, then they should be felled, and the stumps trimmed afterwards.

#### (iii) After Coppicing

Any gaps left after coppicing should be planted up with young plants (see Specifications for Hedge Planting; use species which are already in the hedgerow to replant any gaps). Protective fencing will be required to protect the new growth from livestock. There should be a minimum of 1m left on either side between coppicing and planting. Allow regrowth for 7-10 years before laying the young stems.

## Gapping up

Usually, it is not necessary to plant up gaps of 1 metre or less as regrowth should be sufficient to fill the gap.

For larger gaps, laying across the gap will not ensure that it will close permanently so planting is necessary. Rabbit netting or quills may be required to protect the planting.

Layering (when a laid pleacher is dug into the ground) is acceptable as a means of establishing new root stock in a gap.

Please refer to the hedge planting section in this specification for guidance on hedgerow planting

## Cutting

Cutting can be carried out from the end of September to the beginning March to avoid the breeding season of birds. However, we recommend that where possible, cutting takes place in January or February to leave as much food available for wildlife as possible.

Hedges should not be trimmed when there is a hard frost or during the spring flush.

Cutting should occur on a three-year rotation. This is beneficial to wildlife as many hedgerows tree species flower and fruit on second year wood providing valuable nectar and food sources for pollinators and birds.

Frequent trimming at the same height is damaging to the structure of a hedge. We therefore recommend that incremental cutting is recommended which involves increasing the width and height of the hedge with each cut. Cutting a hedge 10cm higher/wider every cutting avoids causing structural damage to the hedge and allows second year wood for flowering and fruiting.

- If cutting every 3 years, it will take 30 years for a hedge in this cutting regimen to get 1m taller/wider.
- If cutting every 2 years, it will take 20 years to gain 1m in height/width.
- Even if cutting every year, it will take a decade before the hedge has gained 1m in height/width.

It is worth noting however, that hedges that are next to roads and footpaths may need to be cut more frequently to maintain access and safety.

## Size

The number of nesting or feeding bird species is strongly linked to hedgerow size. Approximately double the number of bird species occur in taller hedges (i.e., over 1.4 m (4'6")) compared with shorter hedges; this is also the case with width. Larger hedges provide better shelter from predators, good nesting sites and more food. Having hedgerow as large as you can manage will have the greatest positive impact.

Other important factors for bird numbers include the number of shrub species in the hedge and the proximity of other features such as ponds and woodlands.

## Shape

An 'A' shaped or topped 'A' shaped hedge has advantages for wildlife. An 'A' shape promotes thick growth at the hedge base which is important for food and shelter for wildlife. A shaped hedges also provide an effective wind break, directing the wind over the hedge. Tall, thick hedges with woody outgrowths are of the greatest value for breeding birds. A rectangular shape normally means that one side of the hedge is severely shaded, which will inhibit growth.

## Tools

The type of hedge cutter used influences the growth of the hedge. Tractor mounted circular saw blades or finger bar cutters may be used on heavy growth and to reshape overgrown hedges. Flail hedge trimmers are the most common tools but when used on heavy growth they can cause unsightly cuts, splintering the plants and causing fungal infection and die-back. Hedges can take a long time to recover from this damage. Flail cutters should not be used on woody stems of over 3 years growth or on hedgerow trees.

## **Appendix 1 - suggested hedgerow species for North York Moors**

Alder

Alder Buckthorn (Wet tolerant)

Apple including crab apple

Aspen (Wet tolerant)

Blackthorn - (Wet tolerant)

Broom

Dogwood

Elder (Wet tolerant)

Guelder-rose (Wet tolerant)

Hawthorn

Hazel

Holly

Lime (small leaved)

Field Maple

Oak

Purging Buckthorn

Rowan

Wild cherry

Willow – crack, goat / sallow, grey (Wet tolerant)

Wych Elm

Climbers - Black bryony, Dog rose, Honeysuckle