HEDGEROW ESTABLISHMENT

1. HEDGEROW PLANTING

The specifications provided below are suitable for both planting new hedges and re-planting existing ones. All re-planting will be in compliance with British Standard: 8545.

75.3000 Specifications

Source of Stock: If available, to be British grown stock with seeds sourced from Forestry Authority Zone 404.

Spacing: Hedge plants are to be planted in a double staggered row at a total rate of 4 plants per metre in a double row with 300 mm between the rows.

Trees are to be planted at approximately 10 m spacing.

Distribution of Species: Hedge plants to be planted in single species groups of 3 – 9 plants.

Size/Type of Stock: Hedge plants to be planted as bare root transplants at sizes and condition in Table 1 and feathered trees at sizes and condition as outlined in Table 2.

Common Name	Scientific Name	Size Cm	Age/ Condition	Proportion (%)
Field Maple	*Acer campestre*	45-60	1+1	5
Hazel	*Corylus avellana*	45-60	1+1	10
Hawthorn	*Crataegus monogyna*	45-60	1+1	50
Spindle	*Euonymus europaeus*	45-60	1+1	2.5
Wild Privet	*Ligustrum vulgare*	45-60	1+1	2.5
Crab Apple	*Malus sylvestris*	45-60	1+1	2.5
Blackthorn	*Prunus spinosa*	45-60	1+1	10
Buckthorn	*Rhamnus catharticum*	45-60	1+1	5
Dog Rose	*Rosa canina*	45-60	1+1	5
Elder	*Sambucus nigra*	45-60	1+1	2.5
Wayfaring	*Viburnum lantana*	45-60	1+1	5

Table 1: Hedgerow Requirements

Common Name	Scientific Name	Size Cm	Age/ Condition	Proportion (%)
Field Maple	*Acer campestre*	90-120	1+2	25
Wild Cherry	*Prunus avium*	90-120	1+2	25
Common Oak	*Quercus robur*	90-120	1+2	50

Table 2: Tree Planting Requirements

1.2 Topsoil, Compost, Fertiliser and Anti-desiccants

Topsoil

There will be no imported topsoil unless required by the Ecologist.

Compost

All planting shall have peat free compost incorporated into the planting pit backfill.

Planting compost shall be peat-free organic composted material graded <25mm and free from non-biodegradable material or contamination of any kind and shall have an analysis as outlined in Table 1.3.

Attribute	Value
pH	6-7.5
Conductivity	600-3000 us/cm
Available Nitrogen as NO	35-300mg/1
Available Phosphorous as P_20_5	75-250mg/1
Available Potassium as K_20_{10}	1500mg/1
Available Magnesium as Mg	75-400mg/1

Table 1.3: Compost Analysis

The compost shall be sterilised and supplied by a reputable source approved by the Ecologist. The Contractor shall supply the Ecologist with a certificate to prove that the compost has been sterilised. The compost shall have a COSHH Certificate.

Planting compost shall be incorporated into the backfill or cultivated soil during cultivation at the following rates: -

Feathered Trees: In lower 200mm of arisings at a rate of 1:1.

Fertiliser

All new planting outside of the ancient woodland areas shall have slow release fertiliser incorporated into the planting pit or spread along the length of the hedge. The specification for the fertilizer is provide in Table 1.4 below.

EC FERTILIZER NPK FERTILIZER 3-17-10 containing Magnesium	
Nitrogen (N) total	3.0%
Ammoniacal N	3.0%
Phosphorus Pentoxide (P2O5) soluble in neutral ammonium citrate and water	16.0% (7.0% P)
Phosphorus Pentoxide (P2O5) soluble in water	10.0% (4.4% P)
Potassium oxide(K2O) soluble in water	10.0% (8.3% K)
Magnesium oxide (MgO)	5.0% (3.0% Mg)

Table 1.4: Fertiliser Analysis

The application rates are as follows:

- Trees 100-140 gm per pit.
- Transplant / Hedge plant 070-140 gm per sq. m

1.3 Time of Planting

All preparation for and planting of hedgerows and feathered trees shall only be carried out during the period 31 October to 31 March of 2026.

1.4 Planting

Hedgerows

The hedges to be planted shall be either slit planting or the hedge line shall be cultivated to a medium tilth 600mm wide and 300mm deep. A slow-release fertiliser and compost as specified (in Section 1.2) above shall be incorporated in a second pass following initial cultivation.

Feathered trees

Planting pits shall be excavated for all feathered trees.

Break up and spread to a depth of 25 mm the surplus arisings from each feathered tree pit in the vicinity of the planting pit ensuring that any turf is buried to a depth of no less than 250mm.

Remove any undesirable materials larger than 75 mm in any dimension to Contractor's tip.

Under no circumstances shall planting pits remain open longer than 24 hours. Sufficient soil shall be returned to raise the level not more than 150 mm and not less than 75 mm above the adjacent levels after light firming.

After correct positioning of the plant each pit shall be backfilled with friable topsoil incorporating compost where required and a slow release fertiliser as specified above.

Transplants shall be planted up to the mark on the plant stem which indicates the soil level in the nursery lines. After the roots of the plant have been covered, the Contractor shall firm the soil by treading with the heel adding more soil where necessary to bring the surface level to that of the adjacent areas.

Container grown trees shall be planted in the prepared pit at the nursery mark and the backfill lightly firmed as filling proceeds.

The Ecologist shall approve the placing of each feathered tree prior to backfilling.

All container grown trees and feathered trees shall be watered on the same day as planting to ensure that the full depth of the rootball / planting pit is thoroughly watered.

1.5 Stakes and Ties

Each feathered tree shall be fitted with a stake and tie. Any damage to the trees caused by the Contractor during this operation may result in rejection of stock and replacement by the Contractor at his own expense.

1.6 Tubes, Guards and Ties

To protect from rabbits the Contractor shall: -

(1) Supply and fix in accordance with the manufacturer's instructions to each hedge plant and feathered tree one 600mm long spiral rabbit guard.

The guards shall be supported by one stout bamboo cane 900mm long. No support is required for guards to feathered trees.

The Contractor shall provide samples of guards specified and current copies of the manufacturers product specifications and fixing instructions for approval by the Ecologist at least 7 days before use on site.

1.7 Mulches: Ground Preparation

All feathered trees shall be watered prior to application of mulch to ensure that the full depth of the rootball/planting pit is thoroughly watered.

Approved composted green waste mulch shall be applied to all tree and hedge planting positions where required.

Biodegradable mulch mats shall be applied to planting positions in squares 750mm minimum for trees.

Organic mulch shall have a grading of between 15-65mm nominal and less than 5% wood content.

A sample of the mulch shall be submitted to the Ecologist for approval, along with a statement of source, wood content and grading and certificate of compliance from the source, at least 7 days prior to its proposed incorporation into the Works.

2. PLANTING MAINTENANCE YEAR 0 - 5

2.1 Replacement of Failed or Defective Plants

For a period of 24 months from the date of Practical Completion of the Works for tree and shrub planting, the Contractor shall replace all plants which are missing, found dead, or in the opinion of the Ecologist are failing to make satisfactory extension growth as follows: -

By August 31st of each year of post-planting operations, the Contractor shall assess the planted stock and submit a plot by plot schedule of replacements necessary to maintain 100 percent stocking in accordance with the drawings and any subsequent instructions.

Plants deemed by the Ecologist to be damaged by the Contractors use of herbicide to the extent that vigour is permanently impaired shall be classed as failed and shall be replaced at the Contractor's expense.

In the event that the cause of the damage is disputed the Contractor shall send samples for analysis. Such samples shall be collected and sent in agreement with the Project Manager to an analyst agreed by both parties. If traces of herbicide are found, the Contractor shall bear the cost of the analysis. Plants to be replaced shall be pulled up by the fifteenth day of September.

The Contractor will be required to replace at his own expense any feathered/ standard/ extra heavy standard trees that in the opinion of the Project Manager have become badly misshapen by dieback, disease or damage.

Replacement plants, particularly feathered/ standard and extra heavy standard trees shall be watered.

2.2 Vegetation Cutting: Areas of Planting

The Contractor shall cut all areas of species rich grass within new planting once per annum in August/September. Additional cuts may be requested by Ecologist where required to aid long term establishment and sustainability.

The precise extent of areas to be cut shall be agreed on site with the Ecologist and the extent and working methodology shall take into consideration any special ecological requirements of adjacent plots.

Around the planting plot a narrow hinterland of uncut/infrequent vegetation will be left.

2.3 Stakes, Tubes, Guards and Other Ties

The Contractor shall review all stakes, tubes, guards and ties annually.

During Year 5 of the Aftercare Period they will be removed from plants where they are no longer required. Arisings shall be disposed of offsite.

2.4 Weed Control: Feathered Trees and Hedgerows

The Contractor shall maintain weed free circles for a diameter of 600 mm wide for hedges or 1000 mm diameter for feathered trees.

The maintenance of weed free circles shall be achieved by appropriate means (either the use of glyphosate based herbicides or the use of bio-degradable membranes which will be securely anchored. The Contractor will agree methods on a plot by plot basis with the Ecologist prior to commencing weed control after care operations.

The Contractor shall carry out weed control operations to the planting in hedgerows to ensure the hedge plants remain free from competing vegetation, including along the edges of the sheet mulch and at any spaces or gaps that may occur.

3. HEDGE TRIMMING

The operations described in this and subsequent sections are recommendations only as the long term management of the hedgerows will revert to the landowners.

Once established all the hedges are to be trimmed in the following manner:

- Hedges to be trimmed to allow them to develop to 1.5 m to 2 m wide to encourage bird nesting;
- Not trimming any hedges until February to allow birds and small mammals to utilise the berries;
- Trimming to be completed by March so as not to impact upon the nesting bird season;
- Only one side of the hedge to be trimmed each year;
- The top of the hedge is only to be trimmed if the height of the hedge will become an issue (mainly within development areas) to achieve a height between 1.5 and 1.8 m. The top should only be trimmed every 2-3 years.; and,
- Hedges to be allowed to grow to a height of 4 m prior to hedge laying; this will necessitate the cessation of top trimming at least 2-3 years before.

4. HEDGE LAYING

Once established all the hedges are to be laid every 10 years, to maintain them in good condition.

Hedge laying is the traditional agricultural management technique. It prevents the hedge becoming too leggy and maintains a dense cover between 0 -2 m in height; this is the zone favoured by many small passerines and dormice for nesting.

Hedges are to be laid on the year following the one side trim and need not have a side and top trim prior to laying. If only half the length of hedge is to be laid the remainder will require an appropriate trim. The process starts with removing the surplus material – twigs, old leaves, debris, brambles, rusty wire.

The stem to be laid needs to be selected and about a foot (30 cm) off the ground it should be cut almost right through so that it can be bent over and laid at about 45 degrees. Higher up, nearer the top of the hedge, the stem is then cut at an angle. This stem is called a “pleacher” and it is these pleachers which will grow back vigorously with vertical shoots making the hedge livestock-proof.

Stakes are driven in vertically at 45 cm intervals in the centre line of the hedge. The binders are woven between the stakes with ends wedged behind the stakes. Both the stakes and binders are usually from hazel. The final height of the hedge is about 1.2 m and the stakes will be trimmed off to the same height to give an extremely tidy finish.

Tools

Tools needed are: a billhook, a small axe, a small chainsaw (if qualified to use it), wire cutters, thick gloves going over the wrists and a sharpening stone. A first aid kit.

Materials

Stakes: Should be approximately 1.5 – 1.7 m long and 50 mm diameter sturdy enough to hammer in.

Binders: For the horizontals you need much longer and more flexible poles called “binders” which should be about 3-5 metres long by 20 - 40mm diameter).

5. HEDGEROW RENOVATION

Whilst hedge laying is the preferred long term management technique many of the hedges have been neglected for a number of years. In this instance laying may not be feasible due to the girth of the stems and the height. It is proposed to utilise hedge coppicing with planting of gaps with suitable species (see Table 1). This could be combined with the creation of a dead hedge to provide shelter to the new growth and habitat connectivity for dormice etc.