

The Silvanus Trust

- A guide to tree planting and after care

TREE PLANTING SCHEMES

The Our Trees project which is funded by Western Power Distribution provides trees for schools and community groups. The Silvanus Trust has prepared this guide to help ensure that your tree planting scheme is successful and that you get the most from your trees. If you follow these basic guidelines, you will maximise the chance of your project being successful – and be able to enjoy your trees for years to come.

Assessing the suitability of your site

Site factors are important in the establishment of healthy trees. You need to consider all the following:

GROUND CONDITIONS

What is beneath the ground surface? Rock, rubble, compacted or heavy clay soil may restrict tree growth.

SHADE/EXPOSURE

Is your site particularly shaded or exposed to coastal, salt laden winds? Excessive levels may expose the success of tree planting.

CLIMATE

Temperature has an important influence on tree growth, the milder, the quicker the tree growth. Planting in frost hollows should be avoided.

Too much precipitation or too little can be harmful to the trees growth. After planting, trees will need regular, extra watering if the following spring and summer is a dry one.

Choosing where to plant your trees

Think carefully about where to plant trees on your site. Are there any restrictions on the size of trees once they are mature?

For health and safety reasons

trees should not be planted

- any closer than 10m to buildings
- not over drains, pipes
- near site boundaries
- underneath overhead wires

You also need to consider if leaf litter will be a problem to ponds, paths etc.

Which trees to choose

The following is a list of the species that are commonly provided for planting by the Silvanus Trust.

- Ash (*Fraxinus excelsior*)
- Beech (*Fagus sylvatica*)
- Blackthorn (*Prunus spinosa*)
- Common Dogwood (*Cornus sanguinea*)
- Crab apple (*Malus sylvestris*)
- Dog Rose (*Rosa canina*)
- Downy Birch (*Betula pubescens*)
- Field Maple (*Acer campestre*)
- Goat Willow (*Salix caprea*)
- Golden Willow (*Salix vitellina*)
- Hawthorn (*Crataegus monogyna*)
- Hazel (*Corylus avellana*)
- Holly (*Ilex aquifolium*)
- Hornbeam (*Carpinus betulus*)
- Oak (*Quercus petraea*)
- Red Barked Dogwood (*Cornus alba*)
- Rowan (*Sorbus aucuparia*)
- Scots Pine (*Pinus sylvestris*)
- Silver Birch (*Betula pendula*)
- Whitebeam (*Sorbus aria*)
- Wild Cherry (*Prunus avium*)

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Descriptions

Ash (*Fraxinus excelsior*)

The Ash grows in a wide variety of soils, but it prefers deep calcareous loams. This deciduous species can reach a mature height that is in excess of 28m (90') - in good conditions it is a fast grower.

The Ash is hardy, meaning that it is well suited to coastal sites and those exposed to strong winds. The species withstands pollution well, and has the added advantage of providing a good source of food from the insects it supports for small mammals and birds.

Beech (*Fagus sylvatica*)

This deciduous species prefers soils that are light and dry, although it will tolerate all soil types (other than peat and heavy clay). Beech grows to a height in excess of 25m (80') and it has a medium growth rate. It is susceptible to damage from late spring frosts, but it is wind firm and tolerates smoke and air pollution. It has a high bird, insect and small mammal value. If planted as a hedge it will hold its leaves all winter.

Blackthorn (*Prunus spinosa*)

The Blackthorn grows in most soil types. The average mature height of this species is 3m (10') and has a fast growth rate. Blackthorn is very hardy, withstanding exposure and air pollution well. It produces both attractive black fruits and flowers, so it has a high butterfly and insect value. It does have long spines on the branches. It is a deciduous shrub.

Common Dogwood (*Cornus sanguinea*)

This dogwood produces small white flower in spring followed by black berries in autumn when the leaves also turn to rich autumn shades. This makes it an excellent shrub for birds and insects. It is a deciduous shrub which can grown to 9m (30') if unpruned. It will tolerate many soil types including heavy clay.

Crab Apple (*Malus sylvestris*)

Crab apple is a small deciduous tree rarely over 8m (25') in height. Its habitat is woods, hedgerows and scrub, on all except acid soils. It has flowers in spring and fruit in autumn making it an excellent tree for wildlife, insects, birds.

Dog Rose (*Rosa canina*)

Growing to a height of around 3m (10'), this deciduous species flourishes in a wide variety of soils, and tolerates exposure well. Its fruit and flowers attract a wide range of insects and birds, and you can make jam using the Rose Hips.

Downy Birch (*Betula pubescens*)

The deciduous Downy Birch is a tree that will tolerate exposed conditions with wet soils. Having long catkins in spring it is excellent for birds and insects and casts a light shade in summer. It can grow to 15m (45'), but will tolerate pruning to keep it smaller. As it matures it has a wonderful white, peeling bark.

Field Maple (*Acer campestre*)

The Field Maple is a very hardy, deciduous tree and will grow in most soils. Its average mature height is 10m (30'). This species has a medium growth rate. It is good at withstanding pollution, and tolerates shady conditions. Its leaves have excellent autumn colour.

Goat Willow (*Salix caprea*)

This deciduous shrub is one of the best for emerging insects in the spring because of its very early, large catkins, giving it the common name of 'Pussy Willow'. The catkins can appear as early as January or February. It can grow to 8m (25') and will tolerate wet soils.

Golden Willow (*Salix vitellina*)

This orange stemmed willow will also tolerate moist soil conditions, and left unpruned can grow to a height of 10m (30'). However, to maintain the orange stems it is best to prune it every other year, to

within 60cm of the base. Being deciduous, the shrub provides wonderful colour in winter when the stems are on show. It has catkins in spring which are useful for insects.

Hawthorn (*Crataegus monogyna*)

The Hawthorn grows a variety of soils, except where it is very wet. It grows to an average mature height of 9m (25') and can be said to have a medium growth rate. A hardy, deciduous species, the Hawthorn withstands pollution well, and tolerates exposed sites. Due to the attractive flower and fruits that it produces, it has a high value toward insect species and is excellent for winter bird food. It is also a popular species for bird nesting.

Hazel (*Corylus avellana*)

This deciduous species is very tolerant of most soil conditions. It has an average mature height in the region of 6m (18'), and a fast growth rate. The tree grows well in the shade, and has a high wildlife value. Its nuts provide a good source of food for birds and mammals. The tree itself is an important habitat for insects, especially in spring when the catkins are present.

Holly (*Ilex aquifolium*)

Holly, an evergreen, is very good wildlife shrub; it provides flowers, berries and a good, safe nesting site for birds. It will grow to a height of 12 m (40') on most soils and will tolerate deep shade. However, it can be pruned to keep it a smaller shrub. This can be done in late winter before the flowers appear.

Hornbeam (*Carpinus betulus*)

This deciduous species has an average mature height of 20m (60'), and a slow growth rate. It is tolerant of a wide range of soil conditions. Hornbeam withstands pollution well, copes in exposed sites, and withstands low light levels.

Oak (*Quercus petraea*)

The Oak - a tree species that prefers deep, fertile soils. Shallow, poorly drained and peaty soils are unsuitable, as are exposed areas and frost hollows. An average mature height in excess of 25m (80') and a slow growth rate characterise this species. The deciduous tree has a very good general wildlife value, producing acorns in autumn.

Red Barked Dogwood (*Cornus alba*)

The deciduous red barked dogwood is grown for its colourful stems which shine out in winter. Like its common cousin it has white flowers and will grow to 5m (15'), however, if it is pruned every other year to within 60cm of the base it will keep rejuvenating its red stems. It will tolerate most soils.

Rowan (*Sorbus aucuparia*)

Rowan grows best in well drained, lighter soil. These deciduous trees will attain an average mature height of 9m (25'), and have a fast growth rate. They cope well with exposed and coastal sites, and can withstand pollution. They need plenty of light. The attractive flowers and bright orange fruits mean that the tree has a high bird value.

Scots Pine (*Pinus sylvestris*)

The evergreen Scots Pine prefers light/sandy soils. It will grow in a wide variety of soils including those that are infertile and dry. It usually grows slowly, and to an average mature height of 24m (70'). The Scots Pine is considered to be the best conifer for wildlife, and it will regenerate.

Silver Birch (*Betula pendula*)

This species grows best in acidic soil that is light and dry. Its fast growth rate means that its average mature height of 16m (45') is reached relatively quickly. Good at coping with pollution and exposed sites. The deciduous Silver Birch is an important insect habitat. It produces long catkins in spring and the tree will cast light shade.

Whitebeam (*Sorbus aria*)

The Whitebeam, a deciduous tree prefers light, dry soils that are alkaline, such as those found in chalk and limestone areas. It has an average mature height of 12m (36') and a medium rate of growth. It tolerates pollution, and prefers shady conditions. It has a high insect and bird value, as a result of its showy flowers and fruit.

Wild Cherry (*Prunus avium*)

The Wild Cherry, another deciduous tree, is a species that will grow in a wide variety of soils, but prefers deep, neutral to acid loams that are well drained. It can reach a mature height of 15m (45'), and given the right conditions it has a fast growth rate. It has flowers in spring, so is a very good insect attractant.

Choosing the type of planting stock

We normally recommend planting bare-rooted trees 60-90cm in height, as they have the best chance of survival and are inexpensive although they have delicate roots which dry out easily if exposed to the wind when planting.

If however, the site needs larger trees we can provide them, however they are a lot more expensive and have lower chance of survival. These trees will also be slow growing as they take longer to establish and will need watering on a regular basis.

Tree predators

- Rabbits, voles and field mice are the most common predator on young trees, they eat the buds, shoots and strip the bark up to a height of 50cm.
- If any of the above are present on site, spiral rabbit guards and canes, or tree shelters and stakes will need to be used to protect the trees. Holly do not need guards.

Planting site preparation

To save time on the planting day, especially if children are helping, it is best to do some preparation beforehand. For example – clear the hedge line of weeds, dig over the soil, lay the mulch roll (if being used) and cut crosses in it where the plants are to go.

For tree planting, you can prepare the planting pits so that on the day you just have to backfill with soil, put on the tree guards, stake and tie (if applicable).

When and how to plant

We supply trees and shrubs for planting between mid November and beginning of March when they are dormant and before the new buds appear in the spring. Do not plant if the ground is waterlogged after rain, frosty or covered with snow.

Tree care

Delivery

- When you receive your trees they will be packed in thick, white plastic bags. You can leave them in these bags for a maximum of 3 days, as long as they are kept in a frost free, cool environment, e.g. shed, outside away from sun and frost. However, it is much better for the trees if they are heeled in until planting day. This involves digging a trench or big hole and putting the whole bundle in, covering all the roots to the level they were planted in the nursery. They can remain heeled in for many weeks. The main thing is to keep them cool, do not leave the bags of trees in a centrally heated or sun filled room; they will overheat, dry out and die.
- Always handle young trees gently. They are very fragile and can be easily damaged.
- Keep the fine root fibres moist at all times. If bare roots are exposed to the air on a sunny, frosty or windy day the root fibres can be killed within a minute or so.
- Ensure that any potted plants are well watered before planting.

How to plant

Small whips, 60-90cm plants

- Plants should be planted at a minimum of 1.5-2m spacing from each other in all directions, to give them plenty of room to grow (except hedge planting – see below).
- The top layer of turf should be removed in a 1 metre diameter circle around the stem in order to reduce competition from weed species.
- Make planting holes big enough for all the roots, because otherwise the trees grow poorly and develop weak root systems.
- Plant trees to the same depth at which they were growing in the nursery. This is shown by the soil mark on the stem. Trees planted too shallow may dry out or be loosened by the wind. Those planted too deeply may rot.
- Firm the soil around the plants by treading in with the heel. This fills in any air pockets and firmly anchors the roots. Take care not to scrape the bark when treading in, and be sure the trees stay vertical. Test for firmness by gently tugging the stem – the tree should not lift.
- If spiral rabbit guards are used, wrap the guard around the tree trunk and push the cane in between the guard and trunk. This supports the tree and guard. Holly does not need any type of guard.
- If tree shelters and stakes are used same method as above.
- Give the trees a thorough watering once they are planted, so as to ensure their greatest chance of survival.

Hedge planting

- The site should be prepared prior to planting. Dig a strip to create a weed free area 1m wide by 30cm deep.

- Cover the bare soil with the roll of mulch material, making sure the edges are covered with soil to stop it blowing up in the wind. This will stop most of the weeds growing back. If you have a supply of bark mulch you can spread this over the material after planting to make it look tidier.
- Before planting into the material, you need to cut crosses in it where the plants will go, 2 plants per metre in the row, with 30cm between the rows. This creates a double staggered row, making a thicker hedge.
- When planting the trees, the species should be well mixed to give a more interesting, varied hedge.
- After planting, place a spiral guard around the tree and support it with a bamboo cane between the spiral and tree stem. The spiral guards will expand with the growing plant, but should be removed when the plants are established in 3-5 years time.
- Alternatively, you can dig a trench for your hedge, place the plants in, cover with soil and then add the roll of mulch. However, this is very difficult as it means trying to cut the mulch around the trees.
- Or, if you have a supplier of bark mulch this can be used instead of the fabric, making the whole job of planting a lot quicker, it needs to be 5-10cm thick to suppress weeds and retain moisture.
- If you are planting tree species to grow on as standards in the hedge, then they can be planted with the hedge plants, but marked so that when you trim the hedge, they are left to grow on.

Larger trees, standards, 2m+ in height

- They need to be planted into a weed free circle about 1m in diameter, and at the same depth as they were in the nursery or pot, with at least 1.8m between trees.

- When you backfill the hole with soil do so up to ground level, make sure the tree is not planted too deeply (up the stem of the tree), or too shallow (roots exposed), firm the soil around tree really hard with your boot, so that it doesn't work loose later.
- Put in the stake/guard/tie (the buckle ties fix around the stake in a figure of 8, with the wedge between the two, to stop the tree rubbing against the stake).

After care for your trees and shrubs

Aftercare is crucial to the success of tree planting schemes. It has been estimated that approximately one-half of all planted trees do not survive after their tenth year, often the result of simple neglect.

- If the weather is dry for a long period watering may be needed, but they will not need any sort of artificial fertilisers.

Weeding

- If you do nothing else, please ensure your trees are kept weed free. Weeds compete with the trees for water, light and nutrients, so regular weeding from mid March is essential.
- A weed free area 1m in diameter around the plants is recommended.

Mulching

Mulching is a simple and effective way of suppressing weeds around trees. Almost any bulky organic matter makes a suitable mulch (well rotted bark mulch or woodchips) or black polythene, roofing felt and old carpets can all be used.

When mulching, keep the following points in mind:

- To mulch around a newly planted tree, simply spread a 100-150mm (4-6") deep layer of organic material around the stem in a circle with 900mm (3') diameter. Keep the mulch away from the stem itself to avoid rot starting.

- Use sticks to weigh down hay or other lightweight material which might blow away.
- The mulch is best spread at the time of planting, during the winter or spring. If this is not possible, do it when the ground is wet.

Firming up

In the weeks following planting, in early spring and especially after storms or hard frosts, check to see if the trees need treading in again. Wind-sway can cause a hollow to form around the base of the tree, and frost or mole activity can cause the ground to heave, thus loosening the roots. Tread around any loose stems to keep the soil firm and the stems upright. Trees in exposed locations are most likely to need repeated firming, so check them often.

Other considerations

If any stakes, ties, guards or shelters have been used, check them regularly. The principal concern is to ensure that ties do not become too tight on the trunks, or they may rub the bark or even strangle the tree. Loosen and lower the tie if this occurs.

Try and keep boisterous youngsters away from areas with newly planted trees, smaller trees can easily be snapped in half, as a last resort fence the area off. Young trees are extremely vulnerable to mechanised mowers, strimmers and the like. If possible, ensure that the weeding that is required is done by hand.

Unfortunately, newly planted trees are a soft target for vandals. There is little you can do about this, especially if you have a public access site, other than dealing with any damage that occurs as soon as possible and replacing any missing or irreparable plants.

Remember that trees in exposed locations need the most frequent checking. It is advisable after 5-10 years to remove any trees in bad condition, and deal with overcrowded trees by thinning them out (this does not apply to newly planted hedges).

It's that simple, but if you do have any problems, get in touch and we will try and help!