



A GUIDE TO PLANTING TREES



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SELECTING A TREE

Large - Feature Trees

Horse Chestnut (*Aesculus Hippocastanum*) - Mature horse chestnut trees grow to a height of around 40m and can live for up to 300 years. The bark is smooth and pinky-grey when young, which darkens and develops scaly plates with age. Twigs are hairless and stout; buds are oval, dark red, shiny, and sticky.

Sweet Chestnut (*Castana Sativa*) - Sweet chestnut is a deciduous tree which can reach 35m when mature and live for up to 700 years. They belong to the same family as oaks and beeches. The bark is grey-purple and smooth and develops vertical fissures with age. The twigs are purple-brown, and buds are plum, red-brown, and oval in shape. They can develop vast girths which can reach up to 2m in diameter.

Hornbeam (*Carpinus Betulus*) - Common hornbeam is a deciduous, broadleaf tree which has pale grey bark with vertical markings, and sometimes a short, twisted trunk which develops ridges with age. The twigs are brown-grey and slightly hairy, and the leaf buds are like beech, only shorter and slightly curved at the tips. Mature trees can reach a height of 30m and live for more than 300 years.

Small-leaved Lime (*Tilia Cordata*) - This large deciduous tree can grow to more than 20m high. Its bark is grey-brown and smooth and develops flaky plates with age. The twigs are brown-red in the shade, but become shiny in sunlight. Small-leaved lime may produce suckers from the base of the tree.

Small - Ornamental Trees

Maple (*Acer varieties*) - Can be deciduous trees or large shrubs and many have fine autumn colour, and some have ornamental stems. Grow in a moist but well-drained soil.

- Ultimate height - 2.5-4 metres
- Ultimate spread - 2.5-4 metres
- Time to ultimate height - 10-20 years

Bay (*Laurus Nobilis*) - Glossy, neat evergreen foliage which provides structure and formality. Aromatic and produces berries. Easy to keep in shape by pruning in spring. Grows well in a container or in moist but well-drained soil. Likes sun or partial shade.

- Ultimate height - 8-12 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 20-50 years

Cherry (*Prunus varieties*) - Can be deciduous or evergreen trees or shrubs with showy flowers in spring, and often good autumn foliage colour. Some have edible fruit in autumn, and a few species have ornamental bark. They grow in moderately fertile soil in full sun.

- Ultimate height - 4-8 metres
- Ultimate spread - 2.5-4 metres
- Time to ultimate height - 20-50 years

Forest Pansy (*Cercis Canadensis*) - Are small trees with heart-shaped leaves and clusters of bright pink pea-flowers opening before or with the leaves, followed by flattened, deep purple pods. Grow in fertile, moisture-retentive well-drained soil in sun or partial shade.

- Ultimate height - 4-8 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 10-20 years

SELECTING A TREE

It has been estimated that one third of the food we eat relies on pollination by bees and other insects. Bee populations are in decline and one third of the UK bee population has disappeared in the last 10 years, so it is more important than ever to flowering trees to support all garden pollinators and to extend the pollinating season.



Good for Pollinating Insects

Tree Heather (*Erica Arborea*) - Hardy, fragrant and a good choice for impact. Grow in well-drained acidic soil in full sun.

Snowy Mespilus/Juneberry (*Amelanchier Lamarckii*) - This gives good form and colour; early blossom and the birds love the seeds after the fruit. Grow in moist, lime free, well-drained soil. The best autumn colour is achieved when grown in full sun

Forest Pansy (*Cercis Canadensis*) - Great for a small garden. This variety gives good form, heart shaped leave and pink flowers and is good for all pollinators. Grow in moist, lime free, well-drained soil. The best autumn colour is achieved when grown in full sun

Pear (*Pyrus Salicifolia*) - Open flowers make it easy access for bees Careful pruning is required to allow the tree to keep its natural willow habit show. Grow in moderately fertile soil in full sun.

Lilac (*Syringa vulgaris*) - is a large deciduous shrub or multi-stemmed small tree, growing to 6–7 m high with attractive, sweet-smelling flowers. It is easy to grow in well-drained soil, in full sun.

Buddleja (*Buddleja Davidii*) - Can be evergreen or deciduous shrubs, occasionally trees or scrambling climbers with simple leaves and panicles of small, tubular fragrant flowers. Grow in any well-drained soil in full sun.

Laburnum (*Laburnum Anagyroides*) - are small deciduous trees with leaves composed of three leaflets, and bright yellow pea-shaped pendant flowers. Good as specimen tree for a sunny position with a well-drained soil.

SELECTING A TREE

Fruit Trees

Bird Cherry (*Prunus Padus*) - A large deciduous tree with toothed, ovate leaves turning yellow in autumn, and pendant fragrant white flowers 1cm wide in late spring, followed by small, bitter black fruits. Grow in wet woodlands and areas near streams and riverbanks

- Ultimate height - Higher than 12 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 20-50 years

Crab Apple (*Malus Transitoria*) - Malus are small to medium-sized deciduous trees with showy flowers in spring and ornamental or edible fruit in autumn; some have good autumn foliage colour. Grow in moderately fertile soil; will tolerate partial shade. An ideal specimen trees for small gardens.

- Ultimate height - 8-12 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 20-50 years

Common Elder/Elderberry (*Sambucus Nigra*) - Can be an herbaceous perennial, deciduous shrub or a small tree. Easy to grow in moderately fertile, humus-rich, moist but well-drained soils and thrives on extremely chalky sites. Position in full or part sun

- Ultimate height - 4-8 metres
- Ultimate spread - 2.5-4 metres
- Time to ultimate height - 10-20 years

Damson (*Prunus Insititia*) - A compact, reliably fruiting culinary damson to 2.5-4m in height depending upon the rootstock. Flowers white, fruit very dark blue. Self-fertile. Keep a weed-free area of at least 60cm radius around trunk. Thin fruits if necessary. Irrigate in dry periods. Less susceptible to frost damage than many other cultivars.

- Ultimate height - 2.5-4 metres
- Ultimate spread - 2.5-4 metres
- Time to ultimate height - 5-10 years

Top Tip: Choose fruit trees with single flower plants as double flower plants have had their nectaries bred away in favour of petals.



SELECTING A TREE - UK Native Species

Large Trees

Oak (*Quercus robur*) - A large, deciduous tree growing up to 20–40m tall. As common oaks mature, they form a broad and spreading crown with sturdy branches beneath. Oaks even shorten with age to extend their lifespan. Oak is important for biodiversity as it supports more life than any other native species

Maple (*Acer campestre*) - The bark is light brown and flaky, and twigs are slender and brown and develop a corky bark with age. Small, grey leaf buds grow on long stems. Field maples can grow to 20m and live for up to 350 years.

Scots Pine (*Pinus Sylvestris*) - Scots pine is an evergreen conifer native to northern Europe. Mature trees grow to 35m and can live for up to 700 years. The bark is a scaly orange brown, which develops plates and fissures with age. Twigs are green-brown and hairless.

Yew (*Taxus baccata*) - Mature yew trees can grow to 20m. The bark is reddish-brown with purple tones, and peeling. The yew is probably the most long-lived tree in northern Europe.



Small Trees

Hazel (*Corylus Avellana*) - A large, spreading deciduous shrub or small tree, with rounded leaves turning yellow in autumn, and yellow male catkins in early spring, followed by edible nuts in autumn. Grows well in chalky soil in sun or partial shade.

- Ultimate height - 4-8 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 10-20 years

Blackthorn (*Prunus Spinosa*) - A small thorny deciduous tree with dark green leaves and small white flowers in early spring, followed by round, bloomy black fruits 1.5cm across. Easy to grow in any moist well-drained soil in full sun.

- Ultimate height - 2.5-4 metres
- Ultimate spread - 2.5-4 metres
- Time to ultimate height - 20-50 years

Crabapple (*Malus Transitoria*) - Malus are small to medium-sized deciduous trees with showy flowers in spring and ornamental or edible fruit in autumn; some have good autumn foliage colour. Grow in moderately fertile soil; will tolerate partial shade. An ideal specimen trees for small gardens.

- Ultimate height - 8-12 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 20-50 years

SELECTING A TREE - UK Native Species

Goat willow (*Salix Caprea*) - Mature trees grow to 10m and can live for 300 years. The bark is grey-brown and develops diamond-shaped fissures with age. Twigs are hairy at first but become smooth and can appear red yellow in sunlight. Grow in any deep moist well-drained soil in full sun. Dislikes shallow chalk soils.

- Ultimate height - 8-12 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 20-50 years

Hawthorn (*Crataegus Monogyna*) - A deciduous tree and shrub, usually with spiny branches, lobed or toothed leaves, and clusters of creamy-white flowers followed by red or black fruits. Some have fine autumn colour. Grows in most soils and situations, making a good specimen tree.

- Ultimate height - 2.5-4 metres
- Ultimate spread - 2.5-4 metres
- Time to ultimate height - 10-20 years

Alder (*Alnus Glutinosa*) - Conical in shape, mature trees can reach a height of around 28m and live to approximately 60 years. The bark is dark and fissured and is often covered in lichen. Twigs have a light brown, spotted stem which turns red towards the top. Young twigs are sticky to touch. It grows very fast and loves wet sites and poor soil. Full sun needed. Adds nitrogen to soil. It is a good, tall screening tree.

- Ultimate height - 4-8 metres
- Ultimate spread - 2.5-4 metres
- Time to ultimate height - 20-50 years

Field Maple (*Acer Campestre*) - The bark is light brown and flaky, and twigs are slender and brown and develop a corky bark with age. Small, grey leaf buds grow on long stems. Field maples can grow to 20m and live for up to 350 years. They grow in a fertile, moist but well-drained soil in full sun or part shade.

- Ultimate height - Higher than 12 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 10-20 years

Hazel (*Corylus Avellana*) - Grows well in chalky soil in sun or partial shade. Hazel is often coppiced, but when left to grow, trees can reach a height of 12m and live for up to 80 years (if coppiced, hazel can live for several hundred years). It has a smooth, grey-brown, bark, which peels with age, and bendy, hairy stems. Leaf buds are oval, blunt and hairy.

- Ultimate height - 4-8 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 10-20 years

Holly (*Ilex Aquifolium*) - Mature trees can grow up to 15m and live for 300 years. The bark is smooth and thin with lots of small, brown 'warts', and the stems are dark brown. Grows best in a well-drained soil in a sunny position and suitable for partial shade.

- Ultimate height - Higher than 12 metres
- Ultimate spread - 4-8 metres
- Time to ultimate height - 20-50 years



SELECTING A TREE - Roadside Trees

Vegetation can be effective at mitigating the effects of air pollution primarily by intercepting airborne particulate matter but also by absorbing ozone, sulphur dioxide and nitrogen oxide. Trees are much more effective than grass or low-lying vegetation although the effectiveness is linked to the species. Overall coniferous trees are more effective than broadleaved trees. Traffic on major roads is one of the most significant sources of air pollution in the UK, hence roadside trees can be particularly beneficial. One study in Lancaster found that temporarily installing a line of young silver birch trees outside a row of terraced houses in a street with high traffic volume led to >50% reductions in measured levels inside those houses (Maher et al. 2013). The research suggested that rather than increasing total urban tree cover, single roadside tree lines of a selected, highly effective, particulate matter tolerant species appeared to be optimal for particulate matter removal. Roadside trees are effective at capturing pollutants in rural areas as well as in urban centres as trees are also able to absorb ammonia emitted in agriculture.



Silver Birch (*Betula Pendula*) - Will grow in a wide range of situations. Effective when planted in small groups or as a multi-stemmed specimen. Silver birch is a striking, medium-sized deciduous tree. When mature they can reach 30m in height, forming a light canopy with elegant, drooping branches. The white bark sheds layers like tissue paper and becomes black and rugged at the base. As the trees mature, the bark develops dark, diamond-shaped fissures. Twigs are smooth and have small dark warts.

London Plane (*Platanus x Hispanica*) - A vigorous, large deciduous trees of stately appearance, with maple-like foliage and attractively patterned bark. The London plane can grow to 35m and live for several hundred years. The bark is olive green to grey, with large scaly plates that peel off to reveal a creamy bark beneath. Young twigs are green brown. Easy to grow in moist, humus-rich, fertile soils but avoid planting in vicinity of buildings due to vigorous root system.

Yew (*Taxus baccata*) - Mature yew trees can grow to 20m. The bark is reddish-brown with purple tones, and peeling. The yew is probably the most long-lived tree in northern Europe.

Pin Oak (*Quercus Palustris*) - Can be deciduous or evergreen trees or shrubs, with entire, lobed, or toothed leaves; flowers inconspicuous, followed by characteristic acorns; sometimes good autumn colour. Grow in deep, fertile, well-drained soil. A fast growing spreading deciduous tree. Requires lime free soil

Hornbeam (*Carpinus Betulus*) - Common hornbeam is a deciduous, broadleaf tree which has pale grey bark with vertical markings, and sometimes a short, twisted trunk which develops ridges with age. The twigs are brown-grey and slightly hairy, and the leaf buds are similar to beech, only shorter and slightly curved at the tips. Mature trees can reach a height of 30m and live for more than 300 years.

PLANTING

Most trees can grow in a range of conditions, though some will prefer particular soil types. It is worth looking at trees growing in the neighbourhood to see what's thriving for an idea of what might do well.

It is a good idea to prepare your site so before planting, mark out where each tree will be placed using stones, spray paint or canes. If your planting area is overgrown, cut the grass short and weed. This will make planting easier and reduce competition for water, helping your saplings to thrive.

Equipment

- ◇ Tree with root-ball or in a container
- ◇ Bucket
- ◇ Watering can
- ◇ Spade and fork
- ◇ Stake and tie
- ◇ Tree guard or spiral
- ◇ Mulch (organic matter like chipped bark)



When to Plant

The ideal time is the autumn, after the hot days of summer but before the frosty mornings of winter.

Top tip: Dig a square hole to encourage root growth outwards and prevent roots spiralling around the root ball.

PLANTING

How to plant a tree

1. Dig a hole three times as wide as the pot and the same depth. Loosen the soil around the hole with a fork.



2. Thoroughly soak the root ball in water before planting - standing it in a bucket is good for this.



3. Loosen the root ball around the sides with your fingers to encourage roots to grow into the soil.



4. Place the root ball in the hole so that the point where the roots meet the trunk is level with the surface of the soil.



5. A piece of wood can be useful to check the level.



6. Refill the hole ensuring there are no air pockets around the roots. Firm the soil around the tree making sure the stem remains upright.



7. Use a tree guard or spiral if wildlife visitors may want to nibble the bark.



8. Water well. Add a 5-8cm (2-3in) layer of mulch but leave a 10cm (4in) mulch-free collar around base of stem.



9. Top-heavy trees will probably need staking. Put the stake in firmly at an angle - use a hammer to make sure it's secure.



10. Now attach a tie to your tree to support it in windy weather. Be careful not to tie too tightly around the stem.



Slit planting – For non-established saplings (whips)

1. Press your spade all the way into the ground, then push it forwards to create a slit. Make sure it's deep enough for the tree roots.



2. Keep the slit open with your spade and place your tree inside with the root plug about 2cm below ground level.



3. Remove the spade and push the soil back around the tree.



4. If using tree guards or spirals to protect your saplings, this is the stage to add these. Press the protection firmly into the soil.



PLANTING AFTERCARE

Once the tree is in the ground it is important to care for them to help them thrive, particularly in the first few years.

Weeding

Weeding is the most important step in giving your trees the right start. Keeping a 1 metre diameter around the tree clear of weeds and grass for the first 2-3 years will reduce competition for moisture and nutrients.

You can suppress weeds with mulch, such as bark chips or straw bales. Apply it to a depth of around 10cm to prevent it being blown away or dispersed and top it up annually. You can also buy mulch mats and peg them into the ground to keep them in place.

Alternatively, chemical-based products such as glyphosate will kill weeds. Spray around the base of each tree to create a weed-free ring, approximately 1m in diameter. As with all pesticides, take care when applying and be careful not to touch the tree with the chemical. You must adhere to all instructions and guidance around its use.



Watering

Your trees will adapt to natural conditions so shouldn't need watering, especially as it encourages roots to grow up towards the soil surface rather than down towards groundwater. If there is a particularly long dry spell and you feel watering is necessary, saturate the ground to ensure water soaks deep into the soil.

Mowing

Regular grass cutting is not advised as it invigorates grass growth and increases competition for moisture. If you do want to mow, take care to avoid damaging the trees and guards.

Check tree guards

Strong winds can blow trees over so make sure your guards, canes or stakes are upright and pushed firmly into the soil. Pull up any grass growing inside the guard and carefully replace the guard.

Pests

Pests can cause damage inside the tube so check tree stems and guards for damage. Keeping tree guards firmly pressed into the soil and a weed-free area around your trees will help.

RESOURCES

Local Suppliers

Fryers

Manchester Road
Knutsford WA16 0SX
Tel: 01565 755 455
Web: www.bluediamong.gg

Treetops Nursery

Holmes Chapel Road
Over Peover
Knutsford WA16 9RD
Tel: 01565 722450
Web: treetopsknutsford.co.uk

Grasslands

Free Green Lane
Lower Peover
Knutsford WA16 9QY
Tel: 01565 722766
Web: www.grasslands.co.uk

F Morrey and Sons

Forest Nursery
Kelsall
Tarpoley
CW6 0SW
Tel: 01829 751 342
Web: www.morreys-nursery.com

Resources

Royal Horticultural Society - <https://www.rhs.org.uk/advice/how-to-plant-a-tree>

Woodland Trust - <https://www.woodlandtrust.org.uk/plant-trees/advice/how-to-plant/>

The Tree Council <https://treecouncil.org.uk/>

Bristol Tree Forum www.bristoltreeforum.org

Manchester City of Trees www.cityoftrees.org.uk