

Free Download Edition

Arboricultural Association

# AN INTRODUCTORY GUIDE TO YOUNG TREE ESTABLISHMENT



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Tree Care Supporter



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The home of tree care

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# INTRODUCTION

**Arboriculture can be described as the science and practice of the cultivation, establishment and management of amenity trees for the benefit of society. In other words, arboriculture is tree care. The Arboricultural Association is the leading body for tree care professionals in the UK and beyond; it is a charity and a professional membership organisation which is committed to inspiring, supporting and promoting the tree care community for a society that better appreciates and cares for trees.**

Tree planting is a popular activity, and never more so than in recent years. Many organisations, businesses and political parties in the UK and around the world have pledged to plant trees – tens of thousands, hundreds of thousands and even millions of trees. One of the drivers of this is the need to tackle climate change, with tree planting sometimes presented as the solution to the climate emergency in which we find ourselves.

Unsurprisingly, the Arboricultural Association believes that trees are good and that we need more of them. However, planting a tree is just one small part of the story. Arboriculturists work in tree time, not human lifespans or political cycles. If you consider the first 100 years of a tree's life, then the act of planting might make up half an hour or so, or 0.000058%. It is undoubtedly a very important part of the process – a critical one – but there is so much more to the story.

In the years before an amenity tree is available for planting in the landscape – perhaps a street, a park or a garden – a lot of work will have been done. Propagation and germination, selection and site assessment, tree pit design, consultation, nursery growing and care. After planting there are a few years of young tree maintenance, including watering, and then for decades or centuries to come the healthy survival of the tree is dependent on inspections, pruning, management and protection.

Arboriculture is the profession which spans the whole lifetime of an amenity tree. It includes all the nursery workers, tree officers, contractors, consultants, researchers, suppliers, policymakers and educators who make the whole process happen. Tree planting is important, but it is just one chapter in a long story. The purpose of this guide is to set out some of the factors to consider when seeking to establish, rather than just plant, a tree. Getting a tree in the ground is often the easy part – it is the work which goes on before and particularly afterwards which makes the difference.

This is an introductory guide to young tree establishment; it is not intended to be comprehensive, and it should in no way be seen as a replacement for specialist advice. Arboriculture is an extremely complex and specialist discipline which covers a wide range of very different careers and areas of expertise. This guide provides some ideas for a non-professional audience, as well as signposting the reader to other resources which might prove useful. If in doubt, contact the appropriate arboricultural professional.



# WHY PLANT A TREE?

**Planting a tree is one of the best things anyone can ever do. Trees do so much for us, bringing our communities environmental, social and economic benefits and generally helping society. They are multi-functional infrastructure, doing many different things at once. Some of these benefits can be quantified and valued; others are less tangible but no less important. Trees can...**

- Cool our urban areas.
- Reduce flooding
- Improve air quality.
- Slow traffic speeds.
- Reduce certain types of crime.
- Improve physical health and mental wellbeing for people.
- Provide habitat for a wide range of insects, birds, mammals and fungi.
- Sequester carbon.
- Look beautiful.
- Screen views of undesirable buildings or infrastructure.
- Add cultural and heritage value to an area.
- Provide a sense of place.
- Help community cohesion and local pride.
- Boost commercial activity.
- Create employment and career opportunities.

Many of the benefits associated with trees increase as the tree grows, and it is often the case that the larger the canopy, the greater the benefit. One common metric by which to measure the success of our urban forests is canopy cover – assessing how much of a given area is taken up by tree canopy when looking down from above. However, these canopy cover targets will never be achieved through tree planting alone – we must retain and protect existing trees wherever possible and take appropriate steps to care for those that we do plant.

There are many reasons to plant a tree, and just as many reasons to make sure it is properly looked after.

Inside this guide you will find more information about these tree care posters, which you can also download from our website at [www.trees.org.uk/YoungTrees](http://www.trees.org.uk/YoungTrees). Watering tags are available in a range of languages and can also be downloaded from our website so they can be printed, laminated and attached to tree stakes to encourage people to water trees: [www.trees.org.uk/watering](http://www.trees.org.uk/watering)

# WHERE TO PLANT A TREE?

When planting a tree it is very important to consider where it is going to be located, taking into account the short, medium and particularly the long-term implications. Trees grow! And if you want your tree to mature into an established specimen which delivers the wonderful benefits that trees deliver, then it needs to be positioned in the right place. Some of the considerations listed here apply more to planting in hard landscapes (such as streets) than soft landscapes (such as parks or gardens) but they all need to be thought about. This poster should be read in conjunction with the others in this series, especially 'What to Plant?'.

Often, the decision about where to plant and what to plant will go hand in hand.

# WHAT TO PLANT?

Selecting the right tree to plant is a big decision which could impact the local environment for decades to come. This poster is not intended to tell you the best tree to plant - simply considerations you should think about when making your decision. If we are to future-proof our urban forests against the twin threats of tree pests and diseases, then species diversity is essential. National Equally Important.

**INTENTION**  
What are you hoping to achieve from this planting? Trees are multi-functional organisms, and the goal of the planting will influence species selection.

**SPECIES SELECTION**  
COMMUNITY: What are the community preferences and social values of the people in the area?  
DIVERSITY: Does the species diversity of the local area need improving?  
DIMENSIONS: Is there enough space for your tree to grow to its ultimate size?  
CHARACTERISTICS: Do you want fruit, interesting leaves or bark, magnificent autumn colour, or something else?  
EVERGREEN OR DECIDUOUS: Your round foliage or seasonal change?  
SOIL CONDITIONS: Is the soil acidic or alkaline, sand, loam or clay? What is the drainage like?  
MAINTENANCE: How much pruning and maintenance does your chosen species require? How much water?  
LOCAL CHARACTER: What species would work best with the existing local heritage and landscape?  
PESTS & DISEASES: Are any particular pests and diseases associated with your proposed species?  
CLIMATE: How will the species you choose cope with the likely climate in 10, 50 or 100 years?

**ROOT**  
Have to consider available space for root ball and how deep to dig hole.

More information about tree species selection: [www.trees.org.uk/tree-species-selector](http://www.trees.org.uk/tree-species-selector)

# HOW TO PLANT A TREE

Always undertake work of this nature safely and responsibly, including taking all steps to ensure that you have permission from the landowner and are certain that no underground utilities are present. The hole for a new tree should be no deeper than the root ball/container, but approximately twice as wide. Measure the depth of the hole against the depth of the root ball. It is very important to ensure that the final ground level around the stem matches the nursery line on the tree, which is where you can see the soil mark. These principles apply whether planting bare-root, rootballed or container-grown trees.

# YOUNG TREE AFTERCARE

Planting a tree is just the beginning... the hard part is making sure that it becomes established in the landscape. Practice to put newly-planted trees on a young tree aftercare programme for at least two or three years. This can be achieved without huge investment, in time and attention.

Check stakes, ties and girders. Do they need adjusting or re-tying?

# PLEASE WATER YOUR TREES!

Newly planted trees need regular watering to establish and thrive. Choose a tree species, or one that you can help. Consider the location, but a general rule of thumb is to water during the driest periods with the help of a watering tag.

Where possible, water should be sustainably sourced. Harvested rainwater is ideal, but both water and water which has been used for washing up is also suitable.

# POR FAVOR REGARME

Por favor, regar de forma regular durante periodos secos. El agua corriente o el agua de lluvia son idóneas. Es mejor regar a primera hora de la mañana o bien entrada la tarde.

Por favor, visita: [www.trees.org.uk/watering](http://www.trees.org.uk/watering)

# PROSZĘ PODLEJ MNIE

Proszę regularnie podlewać w okresach bezdeszczowych. Idealna jest woda z kąpieli, mycia naczyń i deszczówki. Najlepiej podlewać wczesnym rankiem lub wieczorem.

Wejdź na [www.drzewa.org.pl](http://www.drzewa.org.pl) [www.trees.org.uk/watering](http://www.trees.org.uk/watering)

# PLEASE WATER ME

Please water regularly during periods of dry weather. Bath, washing up or rain water is ideal. Watering in the early morning or evening is best.

Please visit: [www.treecare.org.uk/watering](http://www.treecare.org.uk/watering)

# RHOWCH DDŴR I FI

Rhowch ddŵr i fi'n aml yn ystod cyfnodau sych Mae ddŵr bath, golchi'r llestri, a glaw yn ddelfrydol Mae'n well rhoi ddŵr yn gynnar yn y bore, neu gyda'r nos

Ymwelwch â: [www.trees.org.uk/watering](http://www.trees.org.uk/watering)

# PLEASE WATER YOUR TREES!

Newly planted trees need regular watering to establish and thrive. Choose a tree species, or one that you can help. Consider the location, but a general rule of thumb is to water during the driest periods with the help of a watering tag.

Where possible, water should be sustainably sourced. Harvested rainwater is ideal, but both water and water which has been used for washing up is also suitable.

# WHERE TO PLANT A TREE?

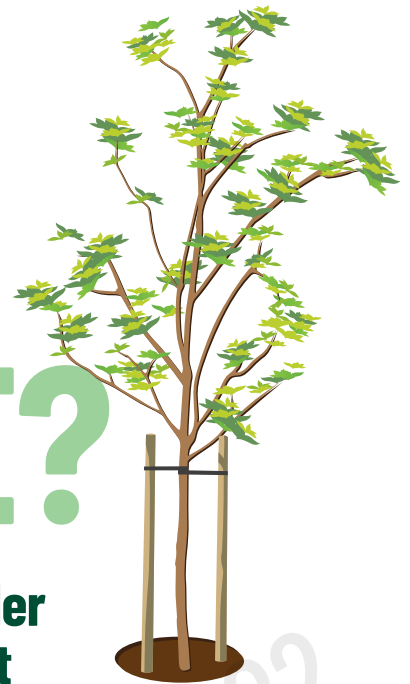
**Planting a tree is a long-term investment, and it is unlikely that the person who is doing the planting will ever see the full benefit of their efforts. Tree planting is a gift for future, as well as current, generations, and we must consider the medium- and long-term implications of what we are doing. This is particularly true when selecting a location for a new tree. The question of where to plant a tree often goes hand in hand with the question of what tree to plant – a particular location might need to be found for a given species, or it might be necessary to select a species for a particular site.**

This introductory guide is likely to be most relevant to people planting trees in soft landscapes (grass areas, gardens and parks) rather than hard landscapes (such as streets or plazas), but the considerations are equally relevant regardless of where the tree is being planted. When looking at a potential site it is important to consider the tree not as it is on the day of planting, but in the context of its likely final dimensions – as it should be in 10, 50 or 100 hundred years. Remember to always make sure you have the permission of the landowner before planting a tree.

Think about how close the tree will be planted to buildings, infrastructure or existing vegetation. A tree planted immediately adjacent to a building will grow outwards, seeking the light. A tree planted beneath the canopy of an existing tree is likely to struggle. Planting a tree too close to a lamp column or overhead utilities will mean that regular pruning is required in the future. The same goes for planting

trees which will ultimately obscure sightlines – of views or buildings, but even more importantly of traffic lights, signs and visibility for safety reasons. It is also worth considering how easy it will be to reach the tree in later years for watering and maintenance.

What is below the ground is just as important as what is above it. When matching a tree species with a location, consider the soil type. Is it sandy, loamy or clay? Is it free-draining, or prone to waterlogging? Is there any risk that it might be contaminated? Soil can be tested to find out more about its composition and condition. Underground utilities such as gas, electricity or water often mean that a site which looks suitable for planting proves unsuitable. Hand-dug trial holes may be required before the final pit is excavated – consider having the site scanned for underground utilities before starting. Underground utilities can kill, so if you are in any doubt, always consult an appropriate professional.



# WHERE TO PLANT A TREE?

When planting a tree it is very important to consider where it is going to be located, taking into account the short, medium and particularly the long-term implications.

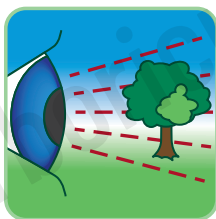
**Trees grow!** And if you want your tree to mature into an established specimen which delivers all of the wonderful benefits that trees deliver, then it needs to be **positioned in the right place**.

Some of the considerations listed here apply more to planting in hard landscapes (such as streets) than soft landscapes (such as parks or gardens) but they all need to be thought about. This poster should be read in conjunction with the others in this series, especially **What tree to plant?**

Often, the decision about **where** to plant and **what** to plant will go hand in hand.



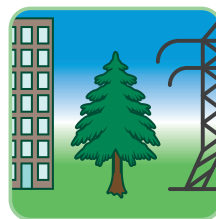
Above- and below-ground utilities



Safety sightlines



Potential obstruction of views



Proximity to structures and infrastructure



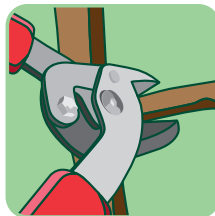
Proximity to existing trees or other vegetation



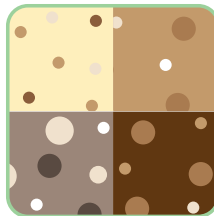
Proximity to roads, pavements and desire lines



Current land usage and local heritage



Access for maintenance



Underground conditions, including soil

**IMPORTANT SAFETY NOTICE:**  
Underground utilities can kill.  
Always make sure it is safe to dig before you start.



Always consult an arboricultural professional if in any doubt about tree care.

For further information, including an introductory guide to young tree establishment, visit [trees.org.uk](https://trees.org.uk).



# WHAT TREE TO PLANT?

**Trees are multi-functional infrastructure – they do lots of things at once, to different extents – and some species will be better or worse at certain things than others. When selecting a tree species for planting, it is therefore important to consider what the ultimate aims of the planting are. Once you know what you want to achieve through the planting, it becomes much easier to determine which species is most appropriate. In addition, the decision about what to plant will also be influenced by the location of the planting, particularly with regard to how much space is available.**

Please remember when selecting a tree species that in order to mitigate the risks of climate change and tree pests and diseases, and to maximise the environmental, social and economic benefits our urban forests bring, diversity in tree species is critical. When considering amenity trees, ‘non-native’ species are just as important as ‘native’ species.

Tree species selection is a complex process. There are many factors to consider, and there is not enough space in this short guide to fully explore them all. There are some key questions to think about which, when combined with additional research and input from a professional arboriculturist where required, can help inform the decision-making process. These questions include:

- **How much space is available for the tree to grow to its final dimensions?**
- **What are the main characteristics you are looking for?**  
These might include fruit, autumn colour, interesting leaves or bark, and many more.
- **What are the soil conditions of the proposed location?** Acidic or alkaline, free-draining or prone to waterlogging?
- **How much maintenance does the species you are considering require?**
- **Are there any particular pests and disease of concern locally, either present now or likely to arrive in the future?**
- **What are the preferences and social values of the local community?**
- **What trees are currently in and around the site, and would you prefer to complement or contrast with them?**

In addition to the species, you must also consider other factors, such as size and root stock. Trees are supplied in a variety of different sizes at the time of planting, from whips

(a very young tree, perhaps not more than 1m tall and with no side branches) up to semi-mature specimens. Many trees planted for amenity purposes have a girth size of between 10cm and 18cm. Large trees are often preferred because they create instant impact and are better able to withstand vandalism. However, they are also more expensive and can be more difficult to handle, plant and establish. Small trees are easy to handle and plant, can establish quickly and are often cheap. However, they may require substantial protection for the first few years after planting.

The main types of root stock available are bare root, rootballed and container grown. As with selecting a size, the advantages and disadvantages of each root stock type should be considered. Bare-root trees tend to be cheaper and easy to handle and plant, but the range of species available is often relatively limited and they must be planted within the standard October to March planting season. They will also have lost much of their fibrous root system in production. Rootballed trees come with their fibrous root system and more species are available, but they can require more specialist handling and planting. Containerised trees can be much easier to transport and plant, offer considerable species choice, preserve the fibrous root system and if necessary can be planted outside the standard planting season (with appropriate aftercare). However, they are considerably more expensive than bare-root trees.

One of the most important considerations when sourcing a tree is biosecurity – preventing the spread of tree pests and diseases. Oak processionary moth and ash dieback (to name just two) were both imported to the UK on trees sourced without proper biosecurity practices. You should only ever purchase a tree from a reputable nursery with strong biosecurity practices. Trees should be UK-grown or, if imported, should have been subjected to an appropriate quarantine period before planting out.





# WHAT TO PLANT?

Selecting the right tree to plant is a big decision which could impact the local environment for decades to come.

This poster is not intended to tell you the best tree to plant – simply to set out some considerations you should think about when making your decision.

If we are to future-proof our urban forests against the twin threats of **climate change** and **tree pests and diseases**, then species diversity is essential. Native and non-native trees are equally important.

1

## INTENTION

What are you hoping to achieve from this planting?

Trees are multi-functional organisms, and the purpose of the planting will influence species selection.

2

## SOURCING

Where will you be sourcing your tree?

Preventing the spread of tree pests and diseases (biosecurity) should be paramount. Only use a reputable nursery with a strong biosecurity policy.

5

## SPECIES SELECTION

**COMMUNITY.** What are the community preferences and social values of the people in the area?

**DIVERSITY.** Does the species diversity of the local area need improving?

**DIMENSIONS.** Is there enough space for your tree to grow to its ultimate size?

**CHARACTERISTICS.** Do you want fruit, interesting leaves or bark, magnificent autumn colour, or something else?

**EVERGREEN OR DECIDUOUS.** Year-round foliage or seasonal change?

**SOIL CONDITIONS.** Is the soil acidic or alkaline; sand, loam or clay? What is the drainage like?

**MAINTENANCE.** How much pruning and maintenance does your chosen species require? How much water?

**LOCAL CHARACTER.** What species would work best with the existing local heritage and landscape?

**PESTS & DISEASES.** Are any particular pests and diseases associated with your proposed species?

**CLIMATE.** How will the species you choose cope with the likely climate in 10, 50 or 100 years?

4

## ROOT STOCK

Bare-root, rootballed and container-grown trees are available, each with their advantages and disadvantages. Bare-root trees are cheap and easy to transport and plant, but might offer limited species choice. Container-grown trees are more expensive but come in a wide range of species and if necessary can be planted outside the normal planting season.

3

## SIZE

Trees are available in a range of sizes at time of planting. Large trees can create immediate impact but may be more expensive and difficult to transport, plant and establish. Smaller trees establish quickly but may require more protection in the first few years.

More information about tree species selection can be found in the Trees and Design Action Group publication *Tree species selection for green infrastructure*, available here:

[www.tdag.org.uk/tree-species-selection-for-green-infrastructure.html](http://www.tdag.org.uk/tree-species-selection-for-green-infrastructure.html)

Always consult an arboricultural professional if in any doubt about tree care.

For further information, including an introductory guide to young tree establishment, visit [trees.org.uk](http://trees.org.uk).



# HOW TO PLANT A TREE

**In order to ensure that your tree has the best possible chance of reaching maturity, it is important to plant it properly. Always undertake work of this nature safely and responsibly, including taking all steps to ensure that you have permission from the landowner and are certain that no underground utilities are present. Some of the specifics around planting may vary with different tree sizes, but this guidance focuses on trees with a stem girth of around 10cm+, up to the sort of size which can be safely handled by one or two people. It also focuses on planting in soft landscapes. In addition, this guide does not cover additional infrastructure which might be used, such as underground guying (a support mechanism), root cells, tree guards, tree grilles, root barriers or watering pipes. If you are using any of these systems, please follow the manufacturer's guidance.**

The hole for a new tree should be no deeper than the root ball/container, but approximately twice as wide. Holes can be circular or square, and different experts have different ideas about which shape is best. In soft landscapes, the soil closest to the surface might be better quality than the material found further down, so consider putting some to one side in order to backfill around the roots once the tree is in place. Measure the depth of the hole against the depth of the root ball before removing any container or hessian. It is very important to ensure that the final ground level around the stem matches the nursery line on the tree, which is the soil mark where the above-ground and below-ground bark meets.

Before setting the tree in place, consider if any formative pruning is required to remove damaged, broken or rubbing branches. It is much easier to do this before planting rather than after. If the tree has a co-dominant stem – i.e. more than one clear central leader – consider pruning back the ones which are not wanted with clean, sharp, disinfected secateurs. However, do not prune the main leader as this will disrupt the tree's hormonal growth pattern. Once the tree is in place and the packaging removed, backfill the hole with some of the material you previously excavated and compact with a boot or the end of a wooden support stake. Keep checking that the tree is straight during this process.

There are many different methods and styles of securing a tree in place after planting, and this choice will be influenced by a range of factors – including the size of the tree. A tree will respond to wind forces by adding new growth to its stem, and it is therefore important that it has room to move in the wind whilst being adequately supported. Crossbeams and diagonal staking are not recommended because they prevent the tree

from moving in this way, which can create a weakness. This guidance recommends planting more substantial trees (with a stem girth of 10cm+) with two timber stakes and rubber ties. The orientation of the stakes may be influenced by aesthetics and the prevailing wind direction. Take care when driving the stakes into the ground: consider both underground utilities and operator safety when using a stake driver and be careful not to damage the tree. Sometimes it is easier to install the stakes before the tree is placed into the hole. Always ensure that the stakes are driven through the ground and not the root ball or container of the tree. Ties should be attached at approximately 1/3rd of the total height of the tree. Stakes and ties should always be removed when no longer required. For smaller trees, such as whips, a bamboo cane and suitable tree guard should provide adequate support.

The recommended surface material to use around newly-planted trees is bark mulch. This suppresses competing vegetation, helps retain moisture, breaks down over time to enrich the soil and ensures that grass-cutting equipment is kept at a safe distance from the base of the stem. A depth of 5–10cm of mulch should be applied after planting, ideally covering a circle around the tree of a minimum 1m diameter. Make sure you do not pile mulch directly up against the stem.

As a general rule, the tree planting season in the UK extends from October to March. Deciduous trees should ideally not be planted when they are in leaf. Consider engaging the local community in your tree planting, and if possible it can be beneficial to leave the nursery identification tag in place so that people are able to identify the tree afterwards. Always water your new tree after planting.



# HOW TO PLANT A TREE

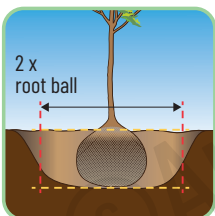


**Always undertake work of this nature safely and responsibly, including taking all steps to ensure that you have permission from the landowner and are certain that no underground utilities are present.**

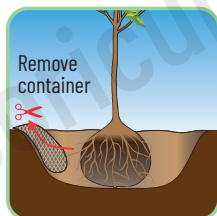
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Measure the depth of the hole against the depth of the root ball. It is very important to ensure that the final ground level around the stem matches the nursery line on the tree, which is where you can see the soil mark.

These principles apply whether planting bare-root, rootballed or container-grown trees.



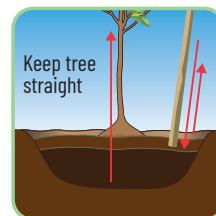
Dig a hole as deep as the root ball and twice as wide



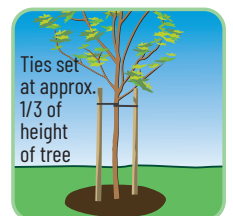
Remove any container or hessian



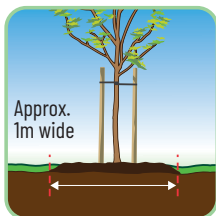
Consider formative pruning before setting in place



Backfill with removed soil, gently compact with stake or boot



Allow for wind movement with two stakes and rubber ties



Add a 1m wide circle of bark mulch, 5-10cm deep



UK planting season is October-March



Avoid planting deciduous trees when in leaf



Always water your new tree

Always consult an arboricultural professional if in any doubt about tree care.

For further information, including an introductory guide to young tree establishment, visit [trees.org.uk](http://trees.org.uk).



# YOUNG TREE AFTERCARE

**The years immediately after a tree has been planted are in some ways the most important in its life. This is the time when the young tree is most vulnerable – old enough to be planted out into the landscape, but young enough to still require plenty of care and attention. One of the most important tasks for the first years after planting is watering, which is dealt with in a separate section of this guide. However, there are also plenty of other considerations.**

In a soft landscape situation (and in some hard landscapes) the area immediately around the tree will have been covered with organic bark mulch. This helps protect the tree from strimmer damage, removes competition from weeds and grass and is hugely beneficial to the tree overall. However, this mulch will break down sooner than you think and it is important to keep it topped up regularly. More information about mulch can be found elsewhere in this guide (see 'How to plant a tree').

If the tree has been supported with above-ground stakes and ties then these will need to be checked every year after planting. Adjust the stakes and ties as necessary, paying particular attention to ensuring that they are still doing the job they were intended to do. Painting the top of each stake with a different colour depending on the year in which the tree was planted can assist with identification and management. Tree support systems should be removed when they are no longer needed; leaving support systems in place for too long can cause damage to the tree.

Much of the pruning work undertaken with chainsaws many years after planting can be avoided if a tree is maintained in its first few years using hand tools to create smaller wounds

from which the tree can recover more easily. Consider removing damaged, dead, broken or crossing branches, paying careful consideration to the future structure of the canopy. Always adopt good biosecurity practices to reduce the risk of spreading disease.

Visiting young trees in the years after they have been planted also provides an opportunity to check their overall health. Whilst detailed diagnosis of a condition will require professional arboricultural input, there are certain problems which should be easy to identify. These might include a failure of the tree to come into leaf in the spring; wilting, yellowing or die back of leaves and shoots; or exudations from the stem.

Around three years after planting the tree should be inspected with a view to deciding whether or not it is ready to be removed from the young tree maintenance programme. If it looks like the tree could do with some more establishment time then simply return the following year until you are satisfied. Once the tree seems secure and established it is time to take away the stake and ties and remove the tree from the young tree maintenance programme. It will now require inspection (and any associated maintenance work) as part of the wider tree stock.



# YOUNG TREE AFTERCARE



**Planting a tree is just the beginning...  
the hard part is making sure that it becomes  
established in the landscape.**

It is good practice to put newly-planted trees on a **young tree maintenance programme** for at least two or three years.

This can be achieved without huge investment,  
**just some time and attention.**

 <p>Regular watering is critical - refer to the Arboricultural Association watering guidance.</p>	 <p>Visit each newly-planted tree at least once a year.</p>	 <p>Remove weeds and grass from the tree pit by hand.</p>	 <p>Check stakes, ties and guards. Do they need adjusting or refastening?</p>
 <p>Check the overall health of the tree: is it OK, or does it seem to be struggling?</p>	 <p>Check for broken, damaged or crossing branches and consider formative pruning.</p>	 <p>Keep mulch levels topped up around the tree.</p>	 <p>Careless grass strimming kills young trees - stay well away!</p>

**After three years** consider if the tree is ready to be taken off the young tree maintenance programme, or if it needs a bit longer. If it is ready then it is time to remove the stakes and ties.

Always consult an arboricultural professional if in any doubt about tree care.

For further information, including an introductory guide to young tree establishment, visit [trees.org.uk](https://trees.org.uk).



# TREE WATERING

**One of the main causes of death in newly-planted trees is a lack of water. In simple terms, water is drawn up by the tree via the roots, through the stem and branches and then exits the tree via the leaves in a process called evapotranspiration. A newly-planted tree will not have an established or extensive root system, meaning that in the summer months when the canopy is in full leaf it will struggle to bring in enough water from the ground to balance what is being lost through the leaves. For the first few years after planting, trees need our help in order to find that water.**

Tree watering is an inexact science and there are many variables involved. These include tree species, size, condition, root stock, soil type, location, weather and climatic conditions. It is not realistically possible to take all of these variables into account in a meaningful way and most recommendations will, therefore, necessarily be oversimplified. The advice provided here is based on a collaboration between the Arboricultural Association, the Association of Tree Officers, the London Tree Officers Association and the Municipal Association of Tree Officers. This group of organisations has also produced the tree watering tags referenced within this guide and available online, which can be affixed to newly-planted trees to encourage passers-by to water them.

We recommend that for the first three years after planting, a newly-planted tree should receive approximately 50 litres of water each week throughout May, June, July and August (in the UK). Depending on seasonal variations it may be necessary to start watering trees as early as April and continue as late as September. These 50 litres can be added to the tree in one visit, or spread over multiple visits. Watering will ideally be carried out in the early morning or in the evening, when temperatures are lower than during the day.

Wherever possible, water used for irrigating trees should be sustainably sourced. Harvested rainwater is ideal, and should be used in preference to potable (drinking quality) water. Recycling grey water, such as from baths or washing-up bowls, is also an option to irrigate trees but the impact of

soap and detergent on soil structure is not fully understood. However, in times of drought when using potable water is expressly banned, the benefits of grey water likely outweigh the potential risks. In general terms it is of great importance that we seek to move away from using potable water in tree care wherever we can.

A watering pipe is sometimes installed alongside a tree. If a watering pipe is present then approximately half of the water should be poured down the pipe and half added to the ground surface around the tree. Some trees are planted with watering bags; if your newly-planted tree has a watering bag then fill it in accordance with the manufacturer's specification. Try to ensure that the water is actually penetrating the ground and is not simply being intercepted by the layer of mulch on the surface.

Under some circumstances it is possible to overwater a tree, which can in itself lead to health problems. However, in general terms it can be said that the risk of a lack of water is greater than the risk of an excess of water. When planting in clay soils it may be advisable to cut a drainage channel, extending away from the base of the pit and filled with gravel, to prevent waterlogging. If you are in any doubt then please speak to an arboricultural professional. Note also that trees in full leaf can still require watering even when it has recently rained, and that a light shower is not going to be sufficient to deliver the required level of water to the roots of the tree.



# PLEASE WATER YOUR TREES!



Arboricultural ASSOCIATION  
Tree Care Supporter



Arboricultural ASSOCIATION  
trees.org.uk



LTOA  
London Tree Officers Association



ATO  
Association of Tree Officers



Municipal Tree Officers' Association  
MTOA  
The Voice of Municipal Arboriculture

Newly-planted trees need to be watered regularly over the summer months if they are going to become established and thrive.

If you have a tree outside your house, or one that you pass on your daily walk, then you can help.

Requirements vary depending on a number of factors such as species and location, but a general rule is that they should receive at least 50 litres of water per week in May, June, July and August.

Please water regularly during dry periods with as much as you can – Every little helps



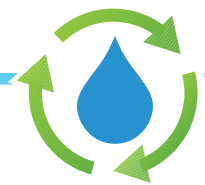
Watering should ideally be carried out in the early morning or evening.



It is good practice to water trees for the first three years after planting.



If the tree has a watering pipe, then half of the water should be poured down the pipe and the other half on the ground surface around the tree. If the tree has a watering bag, then fill that.



Where possible, water should be sustainably sourced. Harvested rainwater is ideal, but bath water, or water which has been used for washing up, is also suitable.

More information about tree watering can be found in the **London Tree Officers Association (LTOA)** publication *Sustainable water management*, available for free download at [www.ltoa.org.uk](http://www.ltoa.org.uk)

For further information, including an introductory guide to young tree establishment, visit [www.trees.org.uk](http://www.trees.org.uk)

# CONCLUSION

**We hope that this introduction to young tree establishment proves a useful guide to anyone who is selecting, planting and caring for a new tree. Tree planting can be easy to do, but difficult to get right. If the trees we plant today are to grow into the mature and ancient specimens of the future then a lot of thought and work is required. It is essential to consider where we are planting them, which species we are planting, how we are planting them and then how we are taking care of them afterwards, including appropriate watering.**

As the name of this publication suggests, this is just an introductory guide and should not in any way be regarded as a substitute for professional input. Arboriculture is a complex and specialist discipline covering many areas of expertise from growing, contracting, consulting and management to research and academia. For future amenity treescapes to be successful it is important that arboricultural professionals and the wider tree care community work together to share knowledge, ideas and experience for the good of our trees and our communities.

Sitting behind the summary information contained within this guide is a wealth of documentation, books, webinars and other resources which we encourage you to go and explore. Here and on the next page are some recommended resources with a particular focus on young tree planting and care, but this is far from being a comprehensive list and there are many, many fantastic resources about trees out there. Some of these are free to access online; others have to be purchased.

## USEFUL WEBSITES

Arboricultural Association: [www.trees.org.uk](http://www.trees.org.uk)

Arboricultural Association Online Learning:  
[www.trees.org.uk/Learning](http://www.trees.org.uk/Learning)

Association of Tree Officers: [www.ato.org.uk](http://www.ato.org.uk)

London Tree Officers Association: [www.ltoa.org.uk](http://www.ltoa.org.uk)

Municipal Tree Officers Association: [www.mtoa.co.uk](http://www.mtoa.co.uk)

Observatree: [www.observatree.org.uk](http://www.observatree.org.uk)

Perennial: [www.perennial.org.uk](http://www.perennial.org.uk)

Plant Healthy Certification Scheme:  
[www.planthealthy.org.uk](http://www.planthealthy.org.uk)

Sustainable Soils Alliance: [www.sustainablesoils.org](http://www.sustainablesoils.org)

Tree Alert: [www.forestresearch.gov.uk/  
tools-and-resources/fthr/tree-alert](http://www.forestresearch.gov.uk/tools-and-resources/fthr/tree-alert)

Tree Care Supporter: [www.treecare.org.uk](http://www.treecare.org.uk)

Trees and Design Action Group: [www.tdag.org.uk](http://www.tdag.org.uk)



# FURTHER READING

*Application of biosecurity in arboriculture.*

Arboricultural Association (2017).

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*Applied tree biology.*

Hirons, A. and Thomas, P. (2018).

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*Arboricultural Association Strategic Plan 2022-24.*

Arboricultural Association (2022).

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*Collins tree guide.*

Johnson, O. (2004).

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*European tree pruning guide (Second Edition).*

European Arboricultural Council (2022).

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*Plantsman's Choice: ARB Magazine article series.*

Sjöman, H. and Hirons, A. (2016-22).

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*Stonehouse Community Arboretum Management Plan.*

Stonehouse Town Council (2021).

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*Surface materials around trees in hard landscapes.*

London Tree Officers Association (2017).

---

*Sustainable water management: Trees are part of the solution.*

London Tree Officers Association (2012).

---

*The pruning of trees, shrubs and conifers.*

Brown, G. and Kirkham, T. (2004).

---

*The tree experts.*

Johnston, M. (2021).

---

*Tree species selection for green infrastructure: A guide for specifiers.*

Trees and Design Action Group (2018).

---

*Trees – A lifespan approach. Contributions to arboriculture from European practitioners.* Editors: Witkos-Gnach, K. and Tyszko-Chmielowiec, P. (2016).

---

*Trees of Britain and Northern Europe.*

Mitchell, A. (1992).

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*Trees: Owners' workshop manual – Haynes Guide.*

Rogers, K. and Kirkham, T. (2019).

---

*Trees: Their natural history.*

Thomas, P. (1997).

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# ABOUT THE ARBORICULTURAL ASSOCIATION

**The Arboricultural Association is the leading organisation in the UK for tree care professionals working in all areas of arboriculture, including central and local government, consultancy, contracting, management, production, policymaking, research and education. It has more than 3000 members in the UK and around the world, and is increasingly recognised as an international, as well as a national, leader in arboriculture. The Association is dependent on its members, its volunteers – including Trustees, Committee members and Branch officials – and a dedicated staff team operating out of the Malthouse in Stonehouse, Gloucestershire.**

Regarded by UK central government departments, local government and sector partners such as the Royal Horticultural Society as the focal point for best practice in tree care, the Association is unique in that its membership operates across the entire spectrum of the profession. It represents its members on numerous projects, working parties and groups, and collaborates closely with international partners such as the European Arboricultural Council, the European Forum on Urban Forestry and the International Society of Arboriculture.

The Association is a charity as well as a membership organisation, working to advance the science of arboriculture and raise awareness and knowledge of tree care globally, inspiring the general public about the importance of amenity trees and the arboricultural professionals who care for them. Much of this work is done through participation at community and public events, school membership, political engagement and, most recently, via the Tree Care Supporter initiative and public-facing content.

Membership grades are available to suit all arboricultural professionals, to whom the Association offers a wide range of services and benefits. Training courses for members at all stages of their professional career are held in a range of topics, in-person around the country and also, in many cases, online. A busy calendar of events includes the ARB Show, the Annual Amenity Conference – the main UK arboricultural conference of the year – and a packed online programme including an acclaimed webinar series enjoyed by viewers worldwide in more than 140 countries.

The Approved Contractor, Utility Approved Contractor and Registered Consultant Accreditation Schemes help raise professional standards and increase awareness of arboriculture, and the Association publishes best practice guidance documents and two quarterly publications – the *ARB Magazine* and *Arboricultural Journal*. The Association has worked for the good of our members, for the profession and for wider society for more than 50 years, and will continue to do so into the future.

# Become a Tree Care Supporter

...because tree **care** is just as important as tree **planting**.

The Arboricultural Association is a registered charity and professional membership organisation. By signing up as a Tree Care Supporter you will be helping us to care for trees, and for the people who care for trees.

## How your support helps

Funding the work of the Association, including:

Producing and sharing best practice guidance for tree care

Development of guides for tree owners

Community and schools outreach

Lobbying government

## What do Tree Care Supporters get?

A Tree Care Supporter **Card**



**Digital**  
ARB Magazine

Monthly Tree Care news e-bulletin

Information about tree care

Access to tree care webinars



Arboricultural  
ASSOCIATION  
Tree Care Supporter

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You can support the foremost arboricultural organisation in the UK with a donation of just **£4 per month**.

*Supporting trees, and the people who care for trees.*

Free Download Edition



### Arboricultural Association

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Scan this QR code to download a copy of each young tree establishment poster or visit [www.trees.org.uk/YoungTrees](http://www.trees.org.uk/YoungTrees)



The home of tree care