



Taking good care of your Majestic Tree

Thank you for your recent purchase from Majestic Trees. We really do appreciate you placing your trust in us, and we hope you have many years of enjoyment as you watch your tree grow.

Personally, I still get a real kick from driving by, or going to see projects that we had the privilege of supplying many years ago, and seeing the trees we planted thriving in the landscape. Typically, I will have personally tagged the vast majority of these trees somewhere in Europe, then brought



them in originally as either bare root or rootballs for the nursery team to then grow on. After lovingly caring for them: pruning, feeding, watering year after year, we are very pleased when you decide to place your trust in Majestic Trees. Thereafter, we most likely delivered you the trees; and probably provided additional services such as our 'Delivery to Tree Pit' or full planting services.

We realise that at this point we transfer the job of caring for the tree to you, but we never lose interest in its welfare. The vast majority of our stock is grown in Air-Pots which ensure that the tree has a fabulous fibrous root system, which does dramatically increase the success rate and establishment of these semi-mature trees. However, if you are not a grower we appreciate that the care of your new purchase may appear daunting, or maybe you would like to have an exact formula of how to care for it. Just like human's we all have different needs, so giving you an exact recipe is very difficult, though I believe this booklet will enable you to better understand your tree and how to care for it.

Please take the time to read it thoroughly, and if afterwards you still have any questions please feel free to either email or call your advisor. Having totally satisfied customers is at the core of our success, so always remember we, as a team, are here for you.

Kind regards

Steve McCurdy

Steve McCurdy

Managing Director



"Our vision is to be an innovative industry leader, striving as a team to deliver ever higher standards of quality, service and professionalism"

Majestic Trees AfterCare Guide

For all aspects of Aftercare which your tree(s) require, we strongly advise that you read this guide in full. If you feel that you are already adept with caring for semi-mature trees, you may wish to skip straight to the watering guidance section.

Providing a **proactive** schedule of care for your new Majestic Tree(s), whether carried out by you personally or by a tree care professional, will ensure your trees continue to flourish after planting. Considering many tree species can live as long as 200-300 years+, understanding the year-round care will ensure that this is an investment that will provide enjoyment and will be valued by the generations after you.



Cover Image and above:

An example of a large project in Hampshire where we have planted 100's of trees since 2005, which clearly shows that good aftercare ensures that your investment will thrive.

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Inspection

By **regularly inspecting** your trees, you can prevent or reduce the severity of potential future issues such as pests, diseases or environmental problems.

These 8 indicators to assess a tree's health are a guide for all species:

1. Presence of new leaves or buds

- absence of new growth, particularly in the spring, is a negative sign.

2. Leaf size

- new leaves are often small, but should reach full size by summer. Stunted, small leaves could indicate stress. Bear in mind that newly planted trees may exhibit slightly smaller leaves than is typical during their first growing season, as their energy is often diverted into developing a strong root system.

3. Leaf appearance

- mottled, deformed, discoloured or dead leaves (in summer) can indicate infection or poor health.

4. Twig growth

- the tree's twigs should get longer each growing season. You can recognise new season extension growth as it will be softer and a different colour than older growth. Growth rates can be compared with previous season's by looking for bud scars along branches of deciduous trees, as this mark indicates where growth has stopped each autumn.

5. Continual growth of the crown

- the tree's crown should be gradually increasing in size, in a balanced way, with no dead branches or lop-sidedness. Unbalanced growth is not uncommon, especially where daylight may be stronger to one side. However, this can be corrected by pruning.

6. Evidence of insect activity or disease symptoms

- not all insect infestations are cause for worry

- most common problems, whilst temporarily unsightly, will not cause any long-term harm to the tree. Tree diseases vary in severity, and often only last while the environmental conditions for the disease are present. As trees establish, their susceptibility to disease decreases.



We stock two sizes of soil auger, which are available to purchase. These enable you to assess the soil moisture levels and new root growth. Please call your advisor if interested.



Fungal growth isn't always a bad sign. However, it is important to examine if they are growing directly on your tree. It could be a sign that the tree is planted too deep, and mycelium is feeding on decaying wood.

7. Condition of the trunk and bark

 loose bark, deformed or irregular stem or branch growth, or presence of fungi can indicate decay or weakness. Some barks naturally crack and peel as they mature, so check the tree attributes before becoming alarmed.

8. Root system

- This can sometimes be difficult to inspect due to being underground; however, anchorage roots should spread into surrounding soil quickly. The base of the trunk should always feel firm, with no soil movement when the head is moved.

If any abnormalities are found during these inspections while the tree is under the establishment warranty, they should be noted and acted upon appropriately. Should you require advice on how to resolve any health issues on your Majestic Tree(s), please send photographs along with a description of your concerns to your sales advisor.

There are also specialist companies which can often advise treatments for many issues. Contact information can be found in the Professional Services and Advice Section.

Watering

During its first growing season, newly planted trees will root out into the surrounding soil, typically enabling them to become completely independent by their second or third growing season after planting. However, during this establishment phase, trees will be relying on you for support. It is therefore **vital** that you understand how to water correctly based your specific conditions.

Don't forget that Birches will continue to drop leaves for up to a week after you discovered it was dry.

Watering newly planted trees is different to watering summer bedding plants, as trees have a much deeper and more extensive root system. You've got to get the balance right: too little support and they will show signs of stress and potentially fail, too much and they will never become fully independent or potentially suffer from waterlogging.

Whenever a tree is planted, **it is vital to immediately water** the entire root ball area of the tree to ensure there is good root contact with the soil. This initial watering will help to eliminate any air pockets which may have otherwise caused fibrous roots to dry out.

Once a **DECIDUOUS** tree drops all its leaves for the winter, **DO NOT** water until the leaves reappear in spring; however, **EVERGREEN** trees may need very occasional winter watering, especially if unseasonably dry or warm and particularly in their first season after planting.

Deciduous trees become dormant after losing all of their leaves in autumn until the following spring when new leaves flush out. Evergreen trees never become fully dormant and will grow slowly throughout the winter, as long as the temperature is, in general, above 5 degrees C.

How to water

The best approach is to give your trees deep soakings less frequently, rather than daily, light sprinkles. This encourages the roots to seek out water and thereby establish into the soil around the root ball. As the roots sense soil moisture levels reducing, the fibrous roots will be encouraged into the surrounding soil in search of more moisture.



Leaf Spot can be a sign of under or overwatering. Be sure to determine which before correcting the problem that is causing the condition.

For a minimum of the first 2 full growing seasons, it is **CRITICAL** that you leave a hose on top of the root ball trickling slowly, so that water soaks into the entire root ball of the tree. 2-4 times per week (dependent on applicable factors influencing your trees water requirement) under 'normal' weather conditions, throughout the growing season. Outward root development can be encouraged by watering the soil around the outside of the root ball as well, gradually becoming more generous as you move out away from the root-ball, into the backfill zone and finally out into the adjoining soil beyond the tree pit. It is good practise to use this technique with trees of all sizes because watering in this way will encourage the roots to 'chase' the moisture outwards, which will result in better root establishment into new soil.

How much water; what factors influence a trees water requirement?

- **Soil type:** Heavy Clay soils do not drain as freely as sandy soils which will affect watering. For example, on a clay soil you may only need to water a tree for 5-10 minutes with a trickling hose, whereas on a lighter, free draining soil it may require 15-30 minutes, again with a trickling hose.
- **Aspect and exposure:** Always consider whether the tree is in full sun all day, or shaded for part of the day and/or if it is in an exposed/windy spot, as the water requirements can be radically different.
- **Species:** Generally, slower growing trees will require much less water than faster growing trees. Consider whether your tree(s) are high or low water uptake species.
- **Size:** Larger trees with larger leaf areas and bigger root balls will often require more water than smaller trees. Trees which have large canopies with relatively small root balls for the size of the tree may have higher water demands.

• **Season:** Water requirements vary dramatically according to season, starting relatively low, increasing throughout summer before tailing off in autumn. As temperatures rise up to and over 25C, the tree's water requirement increases exponentially, particularly if over 30C.

Deep Watering and Inspection Tubes

For larger trees with root balls greater than 150L, we will typically install an aeration and deep watering tube with a visible fill point at the surface. Primarily, this is used to supply the lower section of the root ball with moisture during extraordinarily warm/windy weather where considerable surface watering may be lost to evaporation. This can be particularly effective during times of drought when surface soil can be very hard. Water should ONLY be applied into the fill point for a **MAXIMUM** of 1 minute with a hosepipe (based on average UK flow rate, 10-15L per minute) to avoid waterlogging. This tube also provides the roots with oxygen, and whilst it can be very useful for deep watering, it should never replace the surface watering with a trickling hose. You will see the fill point slightly protruding from the soil at the base of the tree. We do not generally install the perforated pipe on trees where the pot size is 150L or smaller. This is because if applied correctly, a sufficient amount of water is able to reach the entire root ball, and air can actively diffuse to all of the roots.

If your soil is heavily clay based or prone to water-logging, we may install an inspection pipe as well as a deep watering tube for you to monitor the water level at the base of the tree's root ball. Made from the same material as the deep watering tube, this pipe is installed vertically besides the root ball so you can check regularly for standing water at the bottom using a bamboo cane as a dip stick.



Perforated pipe is fitted as a loop, which is installed 200-300mm below the surface at the outer circumference of the rootball on all trees 150 litres or above.



The loop is finished off with a visible fill point above the ground for aeration and deep watering.

How much to water?

One hour after surface watering, the soil around the root ball to its full depth should feel **moist**, but should **not** be wringing with water if squeezed gently in the hand. The amount of water you need to apply, will depend on the applicable factors influencing your tree(s) water requirement.





Underwatering can lead to die back in the crown, but if caught quickly, can be pruned out before serious dieback or even failure occurs. In fact, often the tree can look even better afterwards as the neglect may induce root growth in search of water, and with a prune, the tree should explode into new growth.

It is **CRITICAL** not to over water a tree. Naturally, water molecules will displace air from pore spaces in the soil, which the roots require for respiration. Never allow a tree to be waterlogged for a prolonged period of time as this will cause serious damage to root systems, which may lead to serious decline, or even failure of the tree.

Under-watering is typically **easier** to correct than over-watering if caught quickly but nonetheless it is important to supply your tree with sufficient water if it is not to become stressed. Trees express stress symptoms in different ways dependent on the species. Whilst drought stress **can be fatal** in a worst-case scenario, if caught quickly, the tree will likely fully recover but potentially lose many leaves and may experience some crown die back, depending on how dry it was.

Sometimes the symptoms of prolonged over watering can manifest themselves as very similar symptoms to a lack of water. This is because when a tree suffers root damage or dieback, roots cannot work effectively and are unable to take up sufficient water to support the canopy which therefore displays drought stress symptoms. A quick, physical inspection of the soil will often indicate whether it is wet or dry.

Please note **that rain fall typically does NOT water the tree**, unless excessive, especially during the spring and summer. Depending on the shape of the tree, the canopy can act as an umbrella, deflecting the rainfall outside the root area.

Never allow container-planted trees to dry out.

How often to water

Unfortunately, there is no easy formula for determining how often your trees will need to be watered. This will depend on a range of factors unique to your tree(s) which will influence your trees watering requirement.

Fortunately, we can offer advice about how to assess your tree's watering needs.

The black spotting on this leaf is a fungus called 'Entomosporium leaf spot', and is fairly common on Photinia x fraseri 'Red Robin', especially if overly wet and cold during winter. This condition is more common if the tree is planted on heavy clay, but as long as it does not become waterlogged or exceptionally cold it should survive, and rejuvenate in the spring.

Signs that a tree could require **more water** are:

- Wilting leaves, commonly the younger, outer leaves.
- Yellowing leaves, commonly the oldest, inner leaves first.
- **Brown leaves** which have become crispy at the edges. However, this can also occur as a result of scorch damage.

If you ever find your tree completely dry and showing drought stress symptoms, **immediately** place a hose directly on top the root ball, against the trunk and let it dribble out for anywhere between 30 minutes and a couple of hours dependent on size and species of tree and how dry it was. Depending on the trees response to this water it may be necessary to be cautious over the amount of water supplied until it shows signs of recovery. Please note, it is very important at this point **not to over compensate** and allow the tree to become waterlogged, as this will only cause further damage.

Signs that a tree has been watered too much include:

- Yellowing leaves.
- Rapid leaf drop.
- Poor, stressed growth.
- **Leaf spot,** although there are various fungal and bacterial diseases which may also be the cause of leaf spots.

The severity of underwatering and overwatering symptoms exhibited can **vary depending on the species of tree**, so, if in doubt it is best to very carefully dig a small test hole 30-40cm deep adjacent to the root ball, being very careful not to damage any establishing roots. Assess whether the soil feels dry, powder-like and unable to bind together or if it is too wet, sloppy or even just pure water.

With good care and excellent growth in the first growing season, you should be able to **reduce the level of supplementary water applied to smaller trees in the second season**, unless we have a prolonged period of drought. At the very least, you should be able to start watering later in the second growing season and finish sooner. Trees with girth sizes in excess of 20cm will likely still need further watering in the second season, but possibly less frequently than the first. In both cases, remember to keep an eye on your trees for any signs of dryness or stress for the first two growing seasons after planting and, in exceptionally dry conditions into the third season.



If you are ever unsure about moisture levels, or believe your tree is displaying watering related stress symptoms, please send photographs along with a description of your concerns to your sales advisor

If you do still feel anxious about watering correctly, '**Tree Gators'** are an inexpensive solution. These hydration bags zip up around the trunk and are designed to be filled rapidly with a hose pipe or bowser, then slowly allow water to seep out through tiny perforations over the course 24 hours or so. You may need to fill your 'Tree Gator' **once to three times per week** in the summer months depending on your tree(s) individual watering requirements. Multiple bags can be connected together for larger or high-water uptake trees.



We use a quality Italian made automatic irrigation system that is reliable and relatively simple to use.

Tree Gators are available through some garden centres and also from Majestic Trees; please contact a horticultural advisor for more information.

Automatic Irrigation

If you feel you are unable to commit to hand watering your new Majestic Tree(s) a few days each week, you have too many trees to effectively manage by hand watering, or you simply want the peace of mind to go away during the summer for a holiday without worrying about your trees, an automatic irrigation system may be the best solution.

Majestic Trees can install a timer controlled, surface mounted dripline irrigation system which is inexpensive compared to a below ground system, and is designed to last 2-3 years while your tree(s) becomes established. All we need is an accessible tap that can be connected to the system not too far away from the area to be irrigated.

Our horticultural advisors can assist you on configuration and costs if you are interested. Typically, dripline is installed in rings around the tree with water output carefully calibrated to specific trees. Water pressure must

be sufficient to supply the system with 1 bar of pressure. If your pressure is greater than 1 bar, we can install a pressure regulator to the timer to ensure the system will not be damaged by pressure that is too high.

Some customers request the less expensive seep hose, but we have found that a drip line with regulated drippers every 300 mm is far more reliable, especially where you have hard water.



Once the trees are fully established, usually after 2-3 years, you can remove the irrigation system, though it is wise to keep it in place if the trees are high water users, just in case there is a very long and hot summer. Furthermore, it is also useful to retain it for a few more years if you have fruit trees: and whilst a 'June drop' is to be expected, if it is very hot during the summer the tree may struggle to sustain the retained crop.

Timers are easily adjusted to change both duration and frequency of water applied.

Please note that timers **must not** remain outside over the winter months as they will be damaged by a heavy frost. Simply remove them before winter sets in, storing them inside, but don't forget to re install them the following spring.

Checking StakesPlatipus Anchors

Your trees' stakes and/or Platipus underground or overhead anchors have a **vital** role to play in your trees' establishment. Slight canopy movement by wind can be beneficial to a tree establishing, however, it is important that root balls **do not rock excessively** in the wind as this will sever fine, new roots trying to grow into the surrounding soil.

Check your stakes regularly, and **especially after high winds** to be sure they are firm and the ties and cushions are holding the trees securely in the correct position. Stakes can potentially be removed after two full growing seasons, but this will depend on

Trees, especially Willows will grow very quickly, so regularly check them during the growing season, loosening off the rubber strapping so that it does not become imbedded as your trees grow.



If an overhead Platipus guying system is installed, you must inspect it at least once a year and slacken it off as necessary.

how well your tree is rooted, how exposed is the site and the species and form of tree.

Should you leave the stakes indefinitely, the straps can become overly tight, which **can eventually choke the tree** or, at best, leave a compression mark on the bark. In time, it is even possible for a tree to completely envelop a redundant tie, which can lead to structural weaknesses.

Slight movement of the head of all trees is natural and often a stimulus to encourage better rooting out of the tree, but there is a point where the level of movement becomes detrimental to the establishment of the tree.

Platipus anchors often require further maintenance after the first high



winds. If overhead guys are **slack** and/or if the tree is **moving dramatically** in the wind, or is now **crooked**, the system may need tightening, but not so that the system is over tight. Excessive movement may be seen as a large crack in the soil surrounding the tree.

In all cases, minor movement in the root ball is no cause for concern and should not require any remedial action.

There is never a need to remove the underground Platipus cables, though by all means, cut the top cable out after 3 years to ensure it never comes into contact with the trunk of the tree as it grows. However, if fitted with an overhead guying system, after 2-3 years you can remove the overhead cables by simply cutting off the cable just below the ground at all three points, after which the rest will simply disassemble for disposal.

Whilst Majestic Trees are willing to offer this adjustment or removal service for stakes and guys, it will be chargeable and could be far more cost effective for you to purchase a Platipus Ratchet Handle of the correct size through us (posted to you) and adjust or remove them yourself by rotating the ratchet handle in the correct direction. We offer a 50% refund for all handles returned.

Stakes can be removed by unscrewing or cutting the strapping, then unscrewing the crossbar and rocking and rotating the posts till they are loose enough to pull out, though often they will break after two seasons in the ground. Be careful not to injure yourself by putting too much leverage on your back when pulling the stakes out.

Please contact a horticultural adviser if you have any questions.

Mulching & Weeding

Surface weeds and grass will quickly exploit additional nutrients in fresh compost and the extra soil moisture your watering creates. It is advisable that weeds and grass are removed regularly to prevent them from competing with your trees for water and nutrients. Weed growth will also make assessing the soil moisture very difficult if it cannot be seen. Weeds can also harbour many pests and diseases which can transfer back and forth onto trees, causing potential issues.

Whilst by no means a necessity, mulching can be a multi-benefit practise to increase the health of newly planted trees providing a suitable material is used and it is carried out using the correct technique.

Mulching can:

- Suppress weed growth around trees.
- Retain moisture by preventing evaporation.
- 12

• Provide surface feeder roots with additional nutrition.

- · Increase soil flora/fauna levels.
- · Appear aesthetically pleasing.
- Reduce environmental stress on the soil and provide trees with a stable root environment that is cooler during hot conditions than the surrounding soil.
- Be a good incentive for the prevention of mechanical damage to trees by keeping machines such as lawn-mowers and strimmers away from the tree's base. (Note: this type of mechanical damage is very common and can be fatal to your trees if the bark and cambium layer is damaged to a significant extent around the circumference of the tree).

If you have decided that you would like to mulch your tree(s), the media must be applied onto a pre weeded, de-compacted and watered soil surface. The mulch layer must be no deeper than 10cm thick, ideally 5-7cm.

Thicker mulch layers, 15-20cm or greater, **may inhibit gas exchange** in heavier soils and far too often comes in contact with the trunk which, if left untreated, can often lead to failure.

The composition could be a variety of substrates such as: loosely packed, disease free leaf mould, pine straw, peat moss, or (disease free or sterilised) wood chip, providing these are partially decomposed and a suitable nitrogen-based supplement has been added to them. Naturally, wood requires nitrogen from the soil to decompose, which it steals off any plants growing in the area. To offset this a 50:50 mix of partially rotten wood chip and a nitrogen rich media, such as composted green waste, is an ideal mulch.

Ideally, mulch should be placed over the entire root area of the tree, which may be as far as two to three times the diameter of the branch spread of the tree, once it is fully established. A good guide to begin with is to have the mulch ring at the same circumference as the dripline of the tree (this refers to an area on the ground beneath the canopy that would be in shadow if a light was to be shone from directly above the tree). The mulch ring can always be increased as the tree increases in size in future years.

If the area or activities occurring around the tree do not permit the entire area to be mulched (as is often the case), simply mulch as much of the area under the canopy of the tree as is practical.

It is **CRITICAL** that when placing mulch upon the root zone of the tree, care must be taken that at no point does mulch ever come into contact with the trunk of the tree. A depth increase as little as 2cm touching the trunk is enough to cause a tree to fail. Bark on roots, below ground is different to the bark on stems and branches. The bark on roots is specialised to deal with the transfer of moisture, nutrients and gasses.



Be careful to never install more than 5-7cm of mulch and even then, resist putting it around the trunk of the tree to reduce the likelihood of collar rot.

However, at the point where roots are connected to the trunk (root collar, root flare or buttress) a change occurs. If the root collar or above remains moist for a prolonged period of time it will cause decay. This is known as **collar rot**. Collar rot can occur in as little as 6 months after planting, but also take as much as 5-10 years after planting depending on soil type, moisture level and species of tree.

A **mulch-free ring** around the base of the trunk 10cm in radius, is sufficient to avoid moist bark conditions and prevent trunk decay.

If mulching is not an option, or third parties are caring for the landscape around your trees, we recommend installing strimmer guards around all trees as protection. These are available at some garden centres or through Majestic Trees.

Plastic and Geotextile Membranes

Plastic or any geotextile membrane should never be placed around a tree's root system because it interferes with the exchange of gases between the soil and the air, inhibiting root growth. Regardless of how 'porous' the membrane has been marketed as being, when in contact with a moist soil and topped with an additional substrate, soil particles

migrate upwards, filling the pore spaces in the membrane, creating a layer impervious to water and oxygen. This can result in collar rot or root suffocation and subsequent failure of the tree.

Monitoring the Root Collar

Trees should **never** be planted deeper than the root ball soil level – even a couple of cm above the root collar could cause collar rot and cause the tree to fail. (Note; the **tree's root collar** is the area where and immediately above where the **roots** join the main stem or trunk. Since roots and stems have quite different vascular anatomies, major vascular changes take place at this point making the trunk vulnerable to constant soil moisture).

Regular inspections of the root collar to see if there is any excess soil on top of the original roots is necessary. This should be simple to check, as the roots are usually covered in a wire net, which may remain present for a number of years after planting, but will rot away in time.



If you or someone else planted your trees, it is always important to make sure that they were not planted too deep, as the tree above had been.



If it is not caught, eventually it will lead to collar rot which will not be evident until the tree has started to fail.

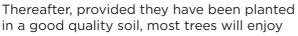
If you find that some soil has moved over the top of the root ball, very carefully with a hand trowel, scrape the soil back to 10cm or more from the trunk. Always wear thick, work gloves when working around the base of newly planted trees, to prevent any root ball wires (which may have become sharp) causing cuts to your hands.

Should this inspection reveal that excess soil has accumulated, remove it from on top of the root ball **immediately**. Depending on the length of time it has been covered, examine the trunk to see if it has begun to rot.

The trunk and basal flare (root collar) should always be exposed to the air. Timely removal of excess soil build-up may save your tree, but monitor it closely for signs of decay.

Fertilisation

If Majestic Trees have planted your tree(s) or you have planted them according to our instructions, they will **not** need fertilising in the first growing season, as slow-release fertiliser/mycorrhizae tablets which last 14 months will have been added to the soil at time of planting.





If we planted the tree, we will have installed fertiliser tablets that will last for around 14 months.

good health and make satisfactory growth without the need to fertilise. This is not to say that a healthy tree wouldn't benefit from an annual top-dressing of fertiliser, especially with a phosphorus/potassium-based feed in autumn.

Top-dress, slow-release fertilisers formulated specifically for trees and shrubs are easy to apply and available from most good garden centres. Be sure to follow the guidance and instructions on the packaging carefully.

Many nutritional deficiencies exhibited by trees can be overcome by applying **the correct fertiliser at the correct time of year**. However, if the tree does not improve, or show response, or you are not confident in diagnosing the issue yourself, we would strongly recommend you consider having the soil tested. Inexpensive soil test kits are available at most good garden centres which are able to give you accurate readings.

Sophisticated soil testing is also offered by professional organisations who can even come to site to evaluate your soil and its nutritional requirements.

Alternatively, you could send photographs with a description of the symptoms you are seeing to your sales advisor.

Over fertilisation can also be detrimental to a tree's growth. Trees are

unable to use excessive amounts of fertiliser and can display toxicity symptoms in the form of leaf scorch, and even root tip burn underground. A build-up of unused fertiliser salts in the soil may become locked up for seasons after the damage was caused.

A final note on fertilisers: it is highly important to be aware that many lawn fertilisers contain **weed and feed formulations that may be harmful to your trees**. The same systemic herbicide that kills broadleaf weeds in your lawn can be up taken by tree roots and may harm or kill trees if applied incorrectly.



Cutting out any reversion on variegated trees is important, as the reverted/ green growth will grow much faster and eventually dominate the tree.

Pruning

Pruning is occasionally necessary to remove dead, damaged or diseased branches, improve structure, enhance vigour, maintain safety or for aesthetic reasons such as topiary.

Pruning mature trees can be difficult to manage safely and **extremely dangerous** if not done correctly. The range of tree surgeons/arborists who operate is vast, with some 'arborists' lacking professional qualifications and experience, who can destroy your tree in a few minutes and rarely carry insurance if anything goes wrong. Choose a professional arborist who carries adequate insurance, is qualified and comes highly recommended. (*Please visit the Arboricultural Association website*> Find A Professional at www.trees.org.uk).

It is always a good idea to request and check references before contracting any tree work: we have received phone calls from too many

people looking for replacement trees after poor tree work has been carried out. A qualified arborist or tree surgeon will be able to determine what type of pruning is necessary to maintain or improve the health, appearance and safety of your trees.

Pest and Disease Control

It is important to remember that your trees are living organisms, existing in nature, which will be joining the ecosystem of your landscape. Aphid infestations, fungal leaf spots, mildews, etc. are **common, naturally occurring** and, in low numbers, will have little/no adverse effect on semi mature trees, just as in nature. Trees which have just been planted may briefly suffer from transplant shock before new roots are produced into new soil and this short-term period of stress can be a window where opportunistic pests and diseases may move onto a tree. At this point, if excessive damage is being caused, it may be necessary to perform remedial treatment in order prevent serious and lasting damage.

A certain degree of tolerance to pest and disease will allow your trees to play their natural role in promoting biodiversity. If the problem is spoiling your enjoyment of the trees or threatening permanent disfigurement, you may need to apply a suitable remedial treatment to help resolve this, though by no



Box tree caterpillars are the larvae of a moth that feeds on Buxus, that lays its eggs throughout the growing season. With no natural predators, the caterpillars hatch out inside the Buxus plant and eat all the internal leaves first. It is difficult to control, let alone eradicate. Regular inspection of all your Buxus is critical, and is best controlled by picking them off by hand.

means do we suggest resorting to chemical applications as a first resort. In woodland environments, there is a biodiverse range of organisms which tend to keep populations of pests and diseases balanced. Woodlands therefore typically survive most pest and disease attacks. However we, in this age of wanting everything to look perfect, fail to grasp that we cannot reduce our environmental impact whilst still spraying or drenching chemicals at will. In years past, it was perfectly acceptable to buy an apple with a worm in it, whereas now we are not only intolerant of fruit or vegetables that are not perfect, but also want them looking perfect, often with a film of wax sprayed on to make them shine!

To help you with diagnosing potential issues, we have included a number of photographs to demonstrate common pests and diseases which you may observe in your garden.

Majestic Trees have compiled a list of recommended amateur products available at most good garden centres on our website: click through on 'AfterCare' then 'Pest and Disease Control' for an up to date list of products which are available at most good local garden centres. We do our best to keep this list current and up to date but accept no liability based on the manufacturers claims.

If after viewing these pictures, you are ever unsure of whether a pest or disease may be detrimentally affecting your tree(s), please send photographs along with a description of the symptoms that you are seeing to your horticultural advisor.

Troubleshooting

Listed below are in our experience some of the most common tree issues reported by customers and how to solve them.

PESTS

CATERPILLAR

SYMPTOMS: Irregular or total defoliation of leaves, often leaving the vein structure of the leaf. There are many species of caterpillar which each prefer different trees as a food source, though in this example, pigeons have also been ripping the new young leaves.

CONTROL: In small populations, it is advisable that they are tolerated. Caterpillars are a vital food source for birds and are part of the natural ecosystem. In severe cases where a large portion of foliage has been eaten, it may be necessary to apply an insecticide available from most good garden centres. Please see our website for recommended products.





APHIDS

SYMPTOMS: Aphids are small, visible, sap sucking insects which can cause leaves to curl and become distorted. There are many different species, however they all cause an overall lack in vigour in the tree and often excrete a sticky honeydew on which black moulds grow. You may see Ants climbing up and down a tree - these do not cause damage but are simply attracted to the sticky honeydew.

control: A small population will have little effect on a large, healthy tree. Often as predator (ladybird) numbers increase as the year progresses, they will disappear. In EXTREME cases, where all of the new growth is covered in Aphid, it may be necessary to purchase an appropriate insecticide from a garden centre, although this really should be a last resort. Majestic Trees can recommend an organic/non organic alternative. Please check our website under AfterCare for current recommendations.





WOOLLY APHIDS

SYMPTOMS: Visible to the naked eye as a white sticky fuzz, usually on the underside of branches. A division of Aphids, these will cause a very similar extent of damage. If large populations are left untreated, they will often lead to swollen areas on branches and the vigour of the tree may be dramatically reduced.

CONTROL: Woolly Aphid are more difficult to control than Aphid due to the white waxy

all outbreaks wearing gloves

covering which totally surrounds the insect. In small outbreaks, wearing gloves, you may simply wish to squash the insects to achieve control, or even better brushing them out with an old toothbrush. If this does not appeal, a high-pressure hose can be effective at washing these insects off, but please be careful that the pressure is not too high that you cause damage to buds. Repeat monitoring and treatment will be required.

VINE WEEVIL

SYMPTOMS: Adults weevils are usually only seen at night, about 1-1.5cm in length and tend to move slowly. They cause very distinctive notching to leaves of a wide range of plants. Larvae however, are more damaging to the plant. They live in the soil and feed on root systems for long lengths of time. A common symptom seen is the wilting of foliage in warm weather as the reduced number of roots struggle to supply enough water to the leaves.

CONTROL: With the removal of many chemicals from the market in recent years, the very best option left is a biological nematode drench. These microscopic insects seek out and destroy vine weevil larvae. Be sure to follow the instructions carefully. These are available direct from:

https://www.nematodesdirect.co.uk/
and are very easy and safe to apply as a
drench with your watering can. Once they
have hatched and become adults, one of the
best controls is to place a piece of sacking,
cloth or thin carpet at the base of the tree,
then quickly lift it during the day and capture
and kill the weevils.







OAK PROCESSIONARY MOTH

SYMPTOMS: Sadly, this pest was accidentally introduced into the UK. Until 2018 it was confined to London and the home counties, but it is now seen throughout the country. The caterpillars tend to feed at night and can often defoliate entire branches of their leaves. If you see a large number of hairy grey caterpillars on an Oak Tree DO NOT under any circumstance touch them. Hairs on the caterpillar are extremely toxic to human skin and respiratory systems. Instead you must immediately report it to the Forestry Commission via its Tree Alert online form. Alternatively, email: opm@forestrycommission. gov.uk or call 0300 067 4442.

CONTROL: You should contact a licensed OPM removal tree company to extract the caterpillars and nests as soon as possible. Majestic Trees can recommend an approved company near you, please contact your sales advisor for more information.





PEAR SUCKER

SYMPTOMS: Another sap sucking pest which can cause damage to Pear species when in high numbers. First seen in spring, the juveniles will begin to feed on new leaves and blossom shoots. The production of honeydew and

secondary sooty mould is characteristic of an outbreak. Swift action is advisable to eradicate this pest, as it can increase in numbers very rapidly and also transmit plant viruses.

CONTROL: Many of the products which in the past have proven effective for the control of Pear Sucker, have unfortunately been removed from the market with few viable alternatives, thus proving harder to control this pest. The insect overwinter as adults, and can be removed by squashing, washing the tree with a high-pressure hose, scrubbing the bark near the buds but being careful not to damage the buds. Alternatively, apply a winter tree wash available from most good garden centres. Please see our website for the list of recommended products.



SCALE INSECT

symptoms: There are many different species of scale insect which in turn affect different tree species. These are sap sucking pests, and for most of their life cycle are immobile. They tend to feed on the underside of leaves, along the central vein reducing the vigour of leaves and new growth. They can also cause distorted growth and transmit viruses. Scale tend to have a tough outer coating impenetrable to many contact insecticides.



CONTROL: By far the best method of control is manual removal, though we appreciate that this is not practical on large trees. The clearing up and disposing off site of all leaf litter is advisable to break the cycle of overwintering. For evergreens it may be necessary to treat large pest populations with a systemic insecticide available from most good garden centres. Please see our website for recommended products which will treat this.

DISEASES

PEAR RUST

SYMPTOMS: Pear Rust is a disease which causes bright orange spots on the upper surfaces of pear leaves in summer and early autumn. The fruits are still edible but the leaves may turn colour and fall off prematurely. Spores tend to be released from raised areas on the leaf underside in late summer and autumn.

control: It is very important to clear up and dispose of the leaves offsite to ensure the disease cannot overwinter and re infect the tree the following year, so do not put the leaves on your compost heap. The disease can actually overwinter on Juniper Trees as well without causing significant damage to them. When incidences are small, it is advisable that this is tolerated, with focus on maintaining optimum vitality within the tree. If the disease becomes out of control, it may be necessary to spray with an appropriate fungicide available from most good garden centres. Please see our website for recommended product which will treat this.





APPLE SCAB

SYMPTOMS: Apple scab is a common fungal disease in the UK. Spores are airborne and, when the conditions are right, they can infect leaves and fruit. Trees are most susceptible for the first 2 seasons after planting, after which the trees resilience greatly increases.

CONTROL: This disease will have very little affect on the trees long term health if the prevalence of disease is relatively low. If visually the disease can be



tolerated for the first couple of seasons, the best course of action is to be diligent clearing up fallen leaves in autumn. The disease can 'rest' on fallen leaves and if these are left to blow around your garden, when temperatures increase the following spring, spores will be released which may reinfect the tree. In severe cases fungicides are available from most good garden centres. Please visit our website for recommended products.

BACTERIAL CANKER

SYMPTOMS: There are many species of bacterial canker which can infect the leaves and stems of tree species. They tend to cause dieback, open lesions and sometimes the oozing out of a jelly like liquid. Cankers begin to form in mid-spring and soon afterwards shoots may die back.

CONTROL: It is best to prune out the canker with clean secateurs, cutting back into clean disease-free wood. Carefully remove infected branches to ensure they do not brush healthy growth. Dispose of offsite or burn diseased wood making sure not to spread the bacterium in the process and then disinfect your tools and wash your hands carefully.





QUINCE LEAF BLIGHT

SYMPTOMS: This disease is becoming increasingly common on Hawthorn species during wet summers as well as Quince trees. The disease is spread in the air and by rain splash and causes leaf spots with grey centres all over the tree. The leaves may also prematurely turn colour and fall off. Fruit may also be spotted and distorted.

CONTROL: As with many diseases, keeping the

tree in the best possible health will give the greatest chances of the tree resisting disease. This disease overwinters on fallen leaves and so diligence with clearing up and disposing of all fallen leaves is important to ensure that the disease does not re infect the tree the following year. In severe cases, it may be necessary to spray with a fungicide which is available at many good garden centres. Please see our website for a recommended list of products



SYMPTOMS: This disease is caused by a soil borne fungus which can remain dormant in the soil for many years until a suitable host is found. Stressed trees are more likely to contract the disease, with some varieties more susceptible if planted on heavy, wet clay. The disease is often first seen as the wilting of certain branches during hot weather. This is caused by fungal spores physically blocking the water conducting vessels in the tree. As the branches become completely blocked off, they will fail. When a branch with suspected verticillium wilt is cut there will be black staining present. This is simply the fungal spores.



CONTROL: All effective fungicide controls have been removed from the market. It is possible to hard prune trees, removing all infected growth. It is CRITICAL that pruning tools are sterilised in between each cut. Growth must be carefully removed and disposed off site or burned. The tree would benefit from afternoon shade and being given a low nitrogen, high phosphorus feed. If the disease is widespread throughout the tree, there is little further treatment.

CORAL SPOT

SYMPTOMS: This is a fungal disease which primarily infects dead or decaying branches. However, as shown in the photograph, it can retreat back into live wood and cause extensive dieback in trees.

CONTROL: Pruning out infected growth in dry weather is the best course of action. Pruning tools must be sterilised in between each cut made, and branches carefully disposed of. Pruning 10-15cm back into healthy wood is advised to ensure none of the

disease is left in the tree. Keeping the tree in good health will ensure that the tree has the best chances of resisting further infection.



SHOT HOLE DISEASE

symptoms: Shot hole a fungal disease which causes many tiny, perfectly round holes in leaves. This gives the appearance that the tree has been blasted with a shotgun. If conditions are right, (12-17°C and the leaf surface remains wet for 12-24 hours), and if a fungal spore lands on a leaf, it will germinate and cause an area of cell death which will eventually fall through leaving a hole.

CONTROL: Mainly affecting Prunus species during the first



few seasons after planting, this disease is not serious and may only persist until the tree is established. The disease has little effect on the health and vigour of a tree and will grow through it quickly. No known controls. Keeping the tree in optimal health will reduce the chances of infection.

PHYTOPHTHORA

SYMPTOMS: There are many species of Phytophthora which are microscopic fungus like organisms which causes rotting of roots and the bases of stems. This disease is soil borne and may survive in the soil for many years in the absence of a host until a suitable tree is found. Bleeding wounds and open lesions are common symptoms.

CONTROL: No known control for this disease. Keeping the tree in optimal health and ensuring there is no standing water around the tree are the best preventative measures.





COLD DAMAGE



Besides the obvious possibility of more tender plants freezing in extreme cold, the other most important consideration is snow fall. Whilst beautiful, the weight of snow can literally destroy a tree, especially evergreens which have greater capacity to capture the snow fall, that if not quickly knocked off, can weigh branches down to the point of breaking. Furthermore, even if the snow starts to thaw during the day, if there is still a significant amount of snow left on the tree it can freeze the following night, dramatically increasing the weight and at best changing forever the shape of the tree, if not completely destroying it. To ensure you do not have a problem, get dressed up warmly, and take a long bamboo pole or equivalent and knock the snow off any trees soon after it has fallen.



Here is an example of a Photinia fraseri 'Red Robin' that somewhat recovered from a having wet feet during a very cold winter. Some stems show significant amounts of bark decay which is covering up the fact that the cambium has retreated beneath, likely only leaving a very limited conduit for water and nutrients to the leaves. In most cases it is best to prune out the worst damage, because even if the tree survives it will be greatly weakened and unlikely to support future growth.

PHYSICAL DAMAGE

DEER DAMAGE

There are several species of deer in the UK which cause harm to trees. Deer tend to strip the bark up to 1.6m up the trunk for food. These outer layers of bark (cambium) are responsible for the transfer of water and nutrients to the canopy. If any, but especially if a significant amount of the circumference of the tree trunk becomes damaged, this will quickly lead to a decline in the canopy, inevitably resulting in the failure of the tree. Additionally, wounds open up the susceptibility of the tree to disease, including coral spot, or create havens for other pests. Deer mesh quards are available to purchase from Majestic Trees, in heights of 1.8 metres tall and 30 cm diameter, though more aesthetically pleasing guards are available. Please contact your sales advisor if you feel they may be necessary at your site.





RABBIT DAMAGE

When food becomes scarce during autumn and winter, rabbits will often carry out similar damage to deer albeit lower down the trunk, and often not as deep as deer damage. Certain tree species with sweeter woods such as Cherry, Apple, Pear, Laurel, Holly and June berries are particularly susceptible. Likewise, if the entire circumference becomes damaged, this will quickly lead to a decline in the canopy, inevitably resulting in the failure of the tree. Rabbit guards are also available to purchase from Majestic Trees, in heights of 1.2 metres and 30 cm diameter, though we can supply simply plastic wrap guard or more aesthetically pleasing guards are available. Please contact your sales advisor if you feel they may be necessary at your site.



MACHINERY DAMAGE

Unfortunately, far too often we see trees which have suffered from neglect: weeds and grass left growing around the base of trees looks untidy and will also compete with the tree for water and nutrients, and damage from strimming around the base of trees. When the outer laver of bark is wounded by strimmer wire, irreparable, long term damaged is caused visually and structurally, but also to the health of trees. These outer layers of bark (cambium) are responsible for the transfer of water and nutrients to the canopy from the roots. If any of the circumference becomes damaged, this will quickly lead to a decline in the canopy, resulting in the failure of the tree.







OVER WATERING

Here is a serious example of juvenile growth on an overwatered Oak tree that, when combined with poor drainage, has resulted in the roots rotting. This is because there is little oxygen in the soil so the tree desperately tries to rejuvenate itself. It has been attacked by a wood boring insect that invades stressed trees and the juvenile growth is the tree's last attempt at survival. Rarely do trees recover when this far gone, and even if they do dramatic crown die back will occur. This is not the more serious 'Sudden Oak Death' or any of the 'Oak Decline' diseases attacking oaks in the UK.





Drainage

Unfortunately, many parts of the UK have heavy clay subsoil, but this does not mean that you can't grow trees in it. In fact, if you look around at the adjacent landscape to where you wish to plant you should see many healthy trees and in the general landscape that are not only surviving, but thriving. Naturally, there are some trees far happier in heavy clay and potentially higher moisture levels than others, but when the soil is very heavy it can become waterlogged during heavy rainfall, especially if a larger area drains into a lower grade where the tree is planted.

It is always wise to plant the tree slightly high, especially in heavy clay, but you must monitor the area where your new tree is planted for any signs of waterlogging in the first winter. If the grass is squishy or the soil has water sitting on it for any length of time after heavy rain, you likely have a problem, especially if in a lower part of the garden. It is extremely common for heavy soil to exist on a new build property or where an extension has taken place, as months heavy machinery use will have severely compacted the topsoil and subsoil. Far too many sites are finished off without adequate decompaction, where just a thin layer of topsoil can conceal the truth of what is lying below the surface. All compacted soil, which has become structureless should have been removed, though this is rarely done, or at the very least drainage implemented with a positive fall to carry any excess water to a suitable location.

Without wishing to alarm you, we aim to simply create awareness of what to watch out for. Any good builder should have installed drainage where necessary, though it is possible they didn't think there may be a problem if the project was completed in the spring or summer. However, if you feel you have a problem, please email us pictures and ask for our advice,

though it may be that we will recommend you get a groundworker in to rectify the situation.

When we occasionally run into this problem, some customers question as to why we did not recommend putting in drains before we planted?

To be clear, the vast majority of trees that we have planted have never had any issues when planted in heavy clay. If we were to simply recommend drainage on every garden with heavy clay most customers would be paying for remedial work that is unnecessary, and typically far more expensive than the tree and planting cost. We will let you know of any concerns we have when planting, and if in any doubt we will install a monitoring pipe for you to put a bamboo cane dipstick into after heavy rain to make sure the ground is draining freely.

However, if there were no concerns at the point of planting, especially when carried out in the spring, summer, or during a dry autumn, it does not mean that possible future problems might be apparent such as waterlogging in the middle of winter. It is advisable that you are as observant as possible, with regards to your soil drainage conditions because prolonged waterlogging can invalidate your establishment warranty. It is **CRITICAL** not to wait until the tree is defoliating and the soil has turned anaerobic as irreparable root damaged may have been caused by this point.



Sadly a customer hired another company to plant the trees they had bought. Not only were they planted too deep, but in this case they were waterlogged. The trees were already dead, evidenced by the sunken bark and collar rot.



A large Parrotia persica that became waterlogged after very heavy rain, now needs drainage installed as soon as possible. Whilst this lawn had always stayed wet through the winter, the shallowness of the grass roots did not accentuate the issue until a tree was planted in the lawn.

AfterCare

Majestic Trees offer an **Aftercare** service for newly planted trees.

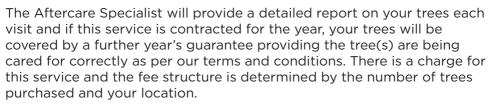
This service usually comprises of monthly* (or some more spaced out) visits between April and October by a horticulturally majestic maj

trained Aftercare Specialist (*Please speak to one of our horticultural advisors if you are interested in this service who can recommend the correct number of visits required depending on your specific tree(s).

A visit will typically comprise of a full health check and inspection of any trees planted by Majestic Trees.

Where necessary, the following practises may be carried out:

- Nutritional deficiency diagnosis
- Fertilisation and stimulant application
- Pest and disease testing and diagnosis
- Chemical application to combat pest or disease
- Light pruning & epicormic growth removal
- Full check of staking, ties and anchor systems
- Soil sampling, testing moisture content
- · Remedial watering
- Full advice of any additional care needed by the tree which can be carried out by you in between visits.



Please contact a horticultural advisor for details.

In the event that your healthy tree begins to struggle even as late as the third growing season, there could be an underlying issue which needs investigating and acting upon.

If we are unable to resolve the issue by email or over the telephone, we do offer a chargeable one-off AfterCare appointment if deemed necessary. A single, one off AfterCare appointment will not extend the guarantee of your trees.



Professional Services and Advice

If you need your trees pruned, cut down or other structural work or a consultation, it is a good idea to check that anyone you contact is a member of the Arboricultural Association, and that you see a copy of their insurance stating the appropriate coverage, before they begin work. You can view their Directory



of Members online at **www.trees.org.uk** or contact the Association by phone on 01794 368717 to ask for a recommended arborist. Please protect your trees and yourself by doing the due diligence before retaining a contractor.

Please note: Majestic Trees is not licensed or insured to provide tree surgery, felling, bracing, stump grinding or in-depth diagnosis.

The RHS (Royal Horticultural Society) Advisory Service offers plant, pest, fruit and soil analysis for its members. Contact them direct for more details at 0845 260 8000; 10am - 4pm, Monday - Friday. If you need a simple soil analysis and are not an RHS member, why not join now as it is often cheaper than sending it to a lab. If you suspect contamination or even possibly poisoning we can recommend an appropriate lab that will be able to look deeper, though these tests can run into the £100's.

Should you suspect that you have found a new pest or disease, you may wish to contact FERA who are in charge of the nations biosecurity. For more information, visit:

https://www.fera.co.uk/crop-health/sample-shipping-information.

If ever you are uncertain about something relating to your Majestic Tree(s) please do not hesitate to telephone or email us as your first port of call. If we are unable to assist you, or your requirements fall outside our scope of expertise, we will refer you to a trusted firm, a professional or indicate where you can get further assistance.



Both high winds and snow can break out branches on a tree. Liquidamber is notably susceptible to this occuring amongst a number of other trees. Once it happens, you will need to decide whether it is best to leave it alone or prune it out, considering both the long term structural soundness of the tree, and the potential for damage to property of humans as it gets larger. Consult an approved arboriculturist for advice on older trees on your property.

Disclaimer: - this guide has been written based on our years of experience and questions from customers, but in no way do we claim it is complete or accept any liability for your interpretation of any of the advice given or its efficacy in all circumstances, allowing for variations in environmental influences.











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