



Together Everyone Achieves More.

# CAPABILITY STATEMENT



[HERITAGETREECARE.COM.AU](https://heritagetreecare.com.au)



1800 353 053



[sales@heritagetreecare.com.au](mailto:sales@heritagetreecare.com.au)



25 Spine Street, Sumner, QLD, 4074





# Eco-conscious, Environmentally FRIENDLY.

**WHO ARE WE?**

Established in 1994 and based in Queensland, Australia; Heritage Environmental Services is committed to providing a comprehensive and professional Arboricultural service that has its foundation in sound Arboricultural practices and techniques. We strive to be the provider of choice for the Arboriculture industry through our reliability, delivery of high quality outcomes and safe work practices. We are 100% organic company focused on sustainability and preservation and strive to maintain the highest standards of Arboriculture to bring you the utmost in tree care and land management. Our Level 3 to 5 Arborists are fully trained to ensure quality workmanship.

Heritage Environmental Services also provides innovative and eco-conscious solutions to areas requiring Vacuum Excavation services, aswell as outdoor and indoor paving options with Porous Paving.

*“Together everyone achieves more.”*



# Contents.

<b>Preface</b>	01
<b>Table of Contents</b>	02
<b>Heritage Tree Care</b>	
Tree Pruning & Trimming	03
Chipping & Mulching	04
Tree Planting	05
Tree Transplanting	06
Tree Removal	07
Soil Decompaction	08
Tree Cable & Bracing	09
Stump Grinding	10
<b>Heritage Consultancy</b>	
Plant Health Care	11
What is Plant Healthcare	12
Soil Nutritional Information	13
Infestations & Disease	14
Tree Consultancy	15
EAL Testing	16
Tree Health Scoring	17
Pathogens & Remediation	18
Vegetation Protection Orders & Tree Protection Zones	19
Sonic Tomography	20
<b>Heritage Porous Paving</b>	
What is Porous Paving	21
Environmental Adaptability & Benefits	22
Arbor-Flex	23
Arbor Pave Plus	24
<b>Heritage Vacuum Excavations</b>	
What is Vacuum Excavation	25
Our Capabilities	26



# Tree Pruning & Trimming.

**PRUNING & TRIMMING - WHATS THE DIFFERENCE?**

Whats the difference between tree pruning and tree trimming? Well it's quite simple actually. The act of pruning a tree involves selectively removing branches from a tree, the goal usually being to remove dangerous or hazardous branches that pose a risk to other environmental objects such as roofs or powerlines while also improving the tree's health.

**TRIMMING - A BREAKDOWN**

Trimming is the process of simply cutting overgrowth to keep a plant looking neat and aesthetically pleasing within a garden setting. This helps with ensuring a uniform appearance across the greenspace of your garden.

Having provided quality trimming services to the greater Brisbane area for well over 10 years now, Heritage Tree Care is the go-to provider for any tree care work that you need done!

Heritage's tree trimming service can provide lots of benefits to your green areas. Our tree trimming service is primarily focused on the overall health of the tree/s in question. No matter if the tree is young or old; we attempt to operate in a way that is best suited to maintain the health of the tree.



Climber ascending a tree in order to trim back a few of it's limbs that posed a substantial risk to both nearby property and people.



Climber ascending a tree in order to trim back a few of it's limbs that posed a substantial risk to both nearby property and people.

# Chipping & Mulching.

**CHIPPING - HOW DOES IT WORK?**

Our expert tree chippers are always available if you need a tree chipped or to give you advice on the process. Whatever your problem may be, we have the correct tools and knowledge to handle the job quickly, safely and effectively.

Our professional teams use wood chippers; these were originally developed by a German called Peter Jensen in the 19th century. They have come a long way since then however they are still dangerous machines to operate if you don't have the skills and knowledge to use them. Wood chippers reduce the size of the wood into manageable sized wood chips, often about 2-8 cm in size by forcing them through a circular set of rotating knives.

**MULCHING - WHAT IS IT AND WHY IS IT IMPORTANT?**

Mulching is the process of applying a layer of dead plant material over an area to restrict unwanted plant growth while also supplying nutrients into the soil below.

Heritage Tree Care knows that wood chips are a very useful product when it comes to tree health and garden maintenance. As part of our tree chipping service, we process chippings from a job so that they can be reused in an environmentally friendly way that can bring extra benefits to trees and plant life.

We stockpile and turn the rich bio-diverse chippings, in order to leech tannins, super-heat to kill off any seeds and insects and start the decomposing process. This aged forest mulch is nutrient rich and can optimise tree health if applied correctly.



Removed tree limb being prepared for chipping & mulching.



Mulch from various chipping jobs being piled for later use.

**DID YOU KNOW?**

Mulch helps keep soil, and therefore plants, cool during the summer and warm during the winter, acting as a thermal blanket for the plants covered by it while also preventing the growth of unwanted weeds.



# Tree Planting.

**PLANNING, PREPERATION, PERSERVEARANCE!**

Planting a tree is not quite as simple as digging a hole and putting it in the ground. Certain considerations must be taken when planting, such as plant species, location, sun/shade tolerance, PH desirability, and planting depth. Think of a newly planted tree as a lifetime investment. How well your tree grows depends on type, location of planting as well as correct installation.

Follow-up care is also essential to providing a tree with the necessities for healthy growth. If a tree has been properly cared for in the nursery and transport care has been appropriate, then planting can be performed at almost any time of the year.

**HOW IS IT DONE?**

Preparing the hole is crucial for plant development. A common adage is that it is better to plant a \$100 tree in a \$200 hole than a \$200 tree in a \$100 hole. Digging a broad and shallow planting hole without disturbing the soil beneath the root ball helps to prevent settling of the plant. Breaking the soil in an area around the tree helps to encourage root growth into the surrounding soil. Determining the region where the trunk meets the roots is necessary to ascertain the correct planting depth and helps to establish a healthy plant, minimizing the risk of infection or decay.

Heritage Tree Care Arborists are educated in understanding where and how plants should be established, giving your plant material the best possible chance of a healthy start and optimal requirements for growth.



Fresh soil and mulch being applied to the surface directly around a tree.



A recently planted sapling planted at the conclusion of development works.



A sapling being planted in a community development project.

# Tree Transplanting.

**WHAT IS TREE TRANSPLANTING?**

From meticulous initial consultation and thorough reports to dedicated aftercare for transplanted trees, we offer comprehensive solutions tailored to your needs. With our advanced techniques and commitment to preserving the health of your trees, you can trust us to handle your tree relocation needs with utmost care and professionalism.

We specialize in using Vacuum Excavation, an innovative method that allows us to excavate around tree root systems safely and efficiently. Unlike traditional digging methods, Vacuum Excavation minimizes the risk of damage to the vital cambium layer of the roots, ensuring the integrity of the root ball remains intact throughout the transplanting process.

**EXPERT GUIDANCE & CONSULTATION**

Not all trees are suitable candidates for transplantation, which is why our qualified Arborists are here to provide expert guidance and consultation. Whether you're considering relocating a single tree or an entire grove, our Arborists can assess the health and viability of the tree, as well as the feasibility of the transplanting process.

From site evaluation to devising a comprehensive relocation plan, our Arborists will work closely with you to ensure the best possible outcome for your trees.



Tree care specialists preparing for the transplantation of a fully grown palm tree in a council park as part of ongoing council work.

**DID YOU KNOW?**

While most trees are grown into saplings in dedicated nurseries then planted, tree transplanting involves digging up mature trees while taking care not to damage their structural roots before replanting them in another prepared location.



A palm tree being replanted to provide better shade to park visitors in Brisbane.



# Tree Removal.

Trees provide significant benefits to our homes and cities. Tree removal can impact the aesthetics of your yard or street and potentially reduce the value of your property. Therefore, deciding on whether or not a tree should be removed can be a monumental decision.

Heritage Tree Care Arborists are adept at removing trees in accordance with industry standards, safely and efficiently. Skilled in state of the art rigging and tree climbing techniques we provide precision and peace of mind.

We have a range of equipment to use including wood chippers and elevated work platforms (Cherry Pickers) to ensure that your tree or trees can be removed with the least amount of worry to you or impact to your landscape.

**Informed, Scientific Decision Making**

Our Arborists can also help you to decide if the tree/trees in question are in fact candidates for removal. Advancements in tree science have helped us develop certain techniques which can mitigate hazards and reduce the likelihood of unwanted invasion from branches and or root systems on buildings, pathways, foundations and electrical connections.

Sometimes however the tree is simply too dangerous or in completely the wrong place and no other option presents itself than removal. Be assured that at Heritage Tree Care we are more than capable of tackling all sizes and difficulty levels. No Tree/trees pose too big a problem.



Cleanup crews removing left over tree limbs and debris following a collapsed tree removal.



Storm Cleanup: A collapsed tree being removed following a storm that brought it down on a public road.

# Soil Decompaction.

**WHAT IS SOIL DECOMPACTION?**

Heritage Tree Care is delighted to offer Soil Decompaction services to provide an efficient and cost-effective solution to the common problem of compacted soil in South East Queensland. A cutting-edge portable soil injector will aerate the soils while simultaneously injecting nutrients and fertilizer deep into the ground to improve the overall condition and health of the soil. This service is suitable for compacted soil:

- Around trees
- In parks
- Sports grounds
- Gardens

**WHY IS SOIL DECOMPACTION IMPORTANT?**

Unfortunately, compacted soil is one of the most common causes of declining trees, the reasons behind this can often be multi-faceted and the reason for this is:

- Soil that is compacted restricts or prevents the flow of water to filter downwards into the water table below.
- Soil compaction in a tree's root zone will obstruct or hamper its growth and vigor, leaving it more susceptible to disease and pest infestations.
- A prolonged lack of water and nutrient access leads to drought and inevitable decline in the overall health of the tree.



Air Spade operator showcasing their machinery.



Air Spade needle that is injected into the ground and is used to disperse the air and other material into the soil.



Air Spade operator demonstrating the process of decompaction that would normally occur underground.



# Tree Cable & Bracing.

**WHAT IS TREE CABLEING & BRACING?**

Arborists use cable and bracing to support structurally weak trees that are vulnerable to storm damage and the weight from their own foliage. This is particularly common in mature, multi-trunked trees and trees with open canopies. Correctly fitted cables help to redistribute the load of the canopy, allowing limbs to support each other and decrease structural stress.

**WHAT TO DO IF YOU BELIEVE A TREE NEEDS CABLEING OR BRACING?**

If you think that one of your trees is a candidate, then it is time to get a Certified Arborist to assess it. Signs of decline include:

- Cracking or vertical splits in the structure of the trunk.
- Subsidence
- Bark Inclusion
- Steep Crotch Angles
- Multi-trunk trees competing for space.

If the problem is identified in time the tree can be cabled and braced using steel rods to provide rigid support and steel or synthetic cables to restrict movement. They are intended to limit the movement of the supported branches so they are less to fail during storms.



Tree cable being used to help brace a tree and keep it structurally secure, reducing the risk to nearby property and pedestrians.



Cable being used to hold two limbs of a tree together to reinforce its structural integrity.



Tree brace, being used to support the limb of a tree that was becoming too heavy to support on its own.

# Stump Grinding.

**WHAT IS STUMP GRINDING?**

Stump Grinding is not only dangerous to do as a novice, it is a long winded task that needs, time, patience and the right machinery – at Heritage Tree Care, we have all of the above. At Heritage Tree Care you can be sure that we will provide all the necessary equipment and fully trained staff to the site, so you don't have to worry about a thing. We will endeavor to make sure our stump grinding company is fast and effective, but also safe.

The process consists of a good few stages, initially reviewing the stump to ascertain the right equipment required is necessary. We will commence with clearing the area to prepare for the job which includes a risk assessment to ensure safety during works. The stump is ground into mulch and, if required, we will then treat the remaining roots to ensure that the tree doesn't decide to start growing again or resprout.



Stubborn to remove, stumps often require specialised equipment to make sure all the roots are pulled out.

**STUMP SPROUTS!**

Depending on the species of tree and under the right conditions, a stump can sprout new growth from the severed stump of a tree. A famous example of this is the Sycamore Gap Tree, a once 150-year old Sycamore tree that was illegally felled in 2023. Since then it has already sprouted new growth from it's trunk and will, over 150-200 years, grow back into a tree of similar stature that had been lost.



Chainsaw operator beginning stump grinding procedures to free the terrain up for new growth.



# Plant Health Care.

**WHAT IS PLANT HEALTH CARE?**

Plant Health Care is a holistic approach that combines scientific diagnosis, preventive treatments, and ongoing monitoring to maintain the overall health of plants. Instead of reactive treatments after symptoms begin to show, our PHC program focuses on keeping trees and plants healthy year-round, reducing the need for costly interventions.

**WHY IS IT SO IMPORTANT?**

Disease, infestations and fungal infections can absolutely ravage an entire garden if not treated right away and can sometimes even have lasting damage on the wellbeing and fertility of your plants. Our Agronomists and Microbiologists are specifically trained to identify environmental stressors that affect individual plant and then provide a comprehensive list of solutions.

While spotting the symptoms of plant or tree stressors isn't usually too hard when you know what to look for; identifying the specific causes and tailoring detailed, handcrafted solution requires the expertise you can only find with Agronomists and Microbiologists.

Likewise, when it comes to growing and maintaining the healthy and fertility of vegetable gardens at home, plant healthcare is absolutely critical to its longevity. Horticulture is a critical science when it comes to cultivating fruits, vegetables, flowers and trees on a smaller scale and is exceptionally important in activities such as garden design.

Simply put, without adequate monitoring and effective care, many plants can struggle or even die without intervention, which is why it's such an important issue to focus on when managing your gardens and green spaces.



Aerial inspection for pest infestations, such as Tree Borers, along the trunk.



Pile of aging forest mulch to be used in soil remediation programs. Mulch increases the carbon content of soil, retains moisture and provides food for soil dwelling micro-organisms which will help with keeping the soil aerated.



Deep soil injection of dry fertilisers with a pneumatic geo-injector for soil decompaction and aeration. This helps with the absorption and flow of nutrients and moisture through the soil.

# The Eco-conscious Experts.

**HOW IS PLANT HEALTH MEASURED AND MONITORED?**

Our agronomist and Microbiologists use a wide range of tools and methods to identify everything to do with the soil, ranging from the identification of any soilborne diseases and fungal infections to the precise nutritional balance of the soil itself. Furthermore, we also conduct visual surveys of the environment to identify any stressors or potential pest infections that may pose a risk to the longevity of your gardens health and fertility. A basic list of tests we conduct include:

**Soil Sampling**

The retrieval of a sizeable soil sample and the testing from each 'horizon' layer of soil helps us identify the nutritional information from the different soil layers. This further allows us to formulate a comprehensive plan to remedy any potential nutrient deficiencies we detect within the soil to promote better plant and tree health.

**Decompaction & Drainage**

We are capable of decompacting soil to assist plants and trees with the flow of nutrients when dealing with heavily compacted soils while also providing draining services for areas where water accumulates, usually due to high concentrations of clay-rich soils.

**Canopy Assessment**

We conduct Canopy Assessments for trees in order to rate and assess both the health and evolution of a tree as it undergoes treatment to ensure that its recovering.



Vertical boring for investigation and soil sample retrieved for testing.



Tomograph testing being conducted to assess the tree's internal structure in a non destructive manner.

**DID YOU KNOW?**

Mulch acts as a fantastic protective layer around your plants and trees, preventing the growth of unwanted weeds and overtime improving the supply of nutrients to the soil once the mulch breaks down.



# Nutrition. Minerals. Fertility.

## SOIL NUTRITIONAL INFORMATION

In order to promote healthy growth and ensure sustainability with your green spaces, the soil requires as much attention as the plants in them. An improperly balanced soil mixture can be more of a hinderance to the wellbeing and overall health of your plants than if it the soil was simply left alone, which is why we make every effort to first learn exactly what the soil needs to thrive thanks to soil testing before we begin applying anything to it!

When it comes to balancing the soil, a lot of factors need to be taken into consideration such as the composition of the different soil layers, the pH levels, the level of filtration possible and finally whether the soil has the correct balance of minerals and nutrients in it to promote healthy growth in the plants. We provide a very wide range of natural fertilisers to help balance the soil that can help manage everything from it's pH levels, water filtration capabilities and to help infuse specific nutrients such as nitrogen, potassium and phosphorus.



Preperation of aerobic microbial compost tea with the bag of compost.

## HOW DO ALL THE DIFFERENT NUTRIENTS PROMOTE HEALTHY GROWTH?

Soil Nutrients all serve a different purpose in the process of managing the health and growth of plants which is why it's important to understand the different elements that promote this purpose. While most people are familiar with the three main nutrients for soil health; Nitrogen, Phosphorus and Potassium (NPK) there are a great many different nutrients that contribute to the overall fertility of soil.

Boron helps reinforce plant immunity and resistance against disease and is also a critical component of plant cell walls and reproductive structures. Because it is required in such small amounts, it is important to distribute it as evenly as possible when it's applied as a fertiliser. However, most traditional fertulizer blends containing Boron often struggle to acheive a uniform distribution of nutrients and thus, despite being such an important nutrient for plant health, is the second most widespread micronutrient defficiency behind Zinc.

Another important yet sometime overlooked nutrient in soil health is Calcium. Serving as both an essential component for plant cell structure as well as acting as a passive tool to slow or prevent the compaction of soil, especially in clay soils where water absorbtion is particulary poor.

Finally, Lime is often used in soil healthcare and nutritional management as a balancing agent for soil acidity. When crushed into a fine powder it can adjust and correct soil acidity levels by raising the pH-levels. Furthermore it is often used to break up heavy clay soils which reduces the damages caused from compacted and waterlogged soil.



Zeolite acts as an ammendment that improves soil aeration as well as nutrient and water retention.



Biochar improves the health of soil by enhancing nutrient retention and increasing the pH-levels of acidic soils.

# Diseases. Pests. Management.

## PEST INFESTATIONS

While there is a very large range of diseases and pest infestations that might affect your garden here are a list of the most common along with some handy tips on how to deal with them! Generally speaking, the worst of all pest infections can be categorised into two groups: Borers and Psyllids.

**Borers** are a category to describe a collection of destructive pests that cause damage to certain trees and woody shrubs. As adults, borers are winged insects (usually moths or beetles) that utilize vulnerable timber in their breeding cycle. They will lay their eggs on the bark of a suitable plant or tree where, upon hatching, the larvae will burrow beneath the bark to devour the carbohydrates produced by the host. In most cases a tree can be killed off in less then a week if exposed to a severe infestation.

Borers can be dealt with by using certain species of parasitic wasps which lay their eggs inside the larvae, killing them from the inside once they hatch.

**Psyllids**, also known as Plant Lice, are small insects that affect a large range of plants. They are a significant problem in South-East Queensland as they feed off the sap of plants causing a wide range of problems. *Psylla australis* is also capable of transmitting diseases from tree-to-tree which further worsens the health of your garden or green space.

The most effective way to counter these common pests naturally is by introducing natural predators into the environment. Psyllids are preyed upon by many small bird species, ladybugs and predatory beetles.



Example of what a wood borer infestation looks like from the outside.



Wasp's play an important role in helping manage and prevent the outbreak of Psyllid's.



(Fungi name) produce enzymes that break down the structure of bark and wood, leading to significant decay in a tree's structure.

## PLANT DISEASES

Plant diseases can spread rapidly and cause significant damage if left unchecked. Our disease management service provides comprehensive monitoring and treatment options to safeguard your plants against infections caused by fungi, bacteria viruses. We conduct regular inspections for any signs of sickness and apply any neccessary treatments when neccesarry.

A few of the most common diseases in South-East Queensland include Root Rot, Canker Disease, Leaf Spot, Powdery Mildew, Fungal Root Disease and Rust Disease. Most of these are directly caused by fungal pathogens and infections, usually spread through a variety of methods but the most common being poor infiltration in highly compacted soil or extremely humid environments.

Effective land management practices can usually prevent these from becoming problems but when it does occur we offer a variety of economical and environmentally friendly solutions to tackle the issue.



# Tree Consultancy.

**WHAT IS TREE CONSULTANCY?**

Consultancy offers specialized consultancy and testing services designed to provide scientific insight and practical solutions for maintaining the health and longevity of your trees and plants.

Our experienced team of Microbiologists, Agronomists, and certified Arborists, utilize advanced testing methods and detailed assessments to deliver accurate diagnoses and customized care strategies.

**HOW IS IT DIFFERENT FROM PLANT CARE?**

We understand that every landscape is unique, which is why we take a personalized approach to each project. Our services extend beyond basic plant health assessments to include soil testing, pest and disease diagnosis, nutrient management plans, and long-term care strategies.

We strive to work alongside you to develop actionable recommendations, ensuring that your trees and plants thrive in their specific environment.

**WHAT KIND OF SERVICES ARE PROVIDED?**

We provide a wide range of services focused on the health, growth and overall wellbeing of the trees on your property. Some of the services we provide include:

**Tree Management Plans**

*Our teams will create highly detailed and comprehensive plans and strategies to help care for your trees over time while also providing advice and consultation on the best course of action when it comes to the removal or relocation of any existing trees on the land.*

**Tree Risk Assessments**

*Similar to Tree Management Planning, we also provide detailed assessments of pre-existing trees to determine their overall health and stability and whether they pose a risk to their immediate surroundings, including but not limited to infrastructure, housing, construction sites and pedestrians.*

**GPS Mapping**

*GPS Mapping is used to great effect to monitor the transformation and changes to large groups of trees in an area over a set amount of time. This helps us both monitor the effectiveness of treatment plans for large tree clusters and whether there are other problems that need to be addressed.*



Ganoderma and Phellinus are common wood decay fungi that are a threat to many tree's across South East Queensland.

**The-Wood-Wide-Web**

Also known as a Mycorrhizal Network, this symbiotic relationship between the roots of all kinds of plant life and specific types of fungi connects the roots of individual plants together, forming an interconnected network that greatly extends the plants access to nutrients and water while also helping protect it from diseases that could otherwise decimate entire forests.

# Experienced. Trusted. Reliable.

**EAL TESTING SUITES**

Environmental Analysis Laboratories (EAL) Testing Suites offer a comprehensive suite of diagnostic tests that analyse soil, plant tissue, and water quality. This data-driven approach allows us to assess key environmental factors influencing plant health; such as nutrient levels, soil composition, salinity, and even contamination.

These insights guide the development of precise fertilization and irrigation strategies, ensuring that your landscape has the ideal conditions for growth. EAL Testing Suites are essential for anyone looking to optimize the health of their soil, improve plant vitality, or address environmental stressors.

**SOIL MINERAL TESTING & MANAGEMENT**

Analyzing the mineral composition of soil is an essential practice in agriculture, horticulture and landscaping for several important reasons. Soil is at the very foundation of plant and tree health where its mineral content plays a critical role in the growth, development and overall health of these organisms.

**SOIL MICROBIAL ASSESSMENT**

The health of your plants is deeply tied to the microorganisms present in your soil. Our Soil Microbial Assessment provides a detailed analysis of the microbial life in the soil, including beneficial bacteria, fungi, and other organisms that contribute to nutrient cycling and disease suppression.

By understanding the balance of microbial populations, we can recommend specific treatments to enhance soil health, such as adding organic matter, applying compost teas, or incorporating bio-stimulants. This service is especially useful for promoting long-term soil fertility and resilience in both urban and rural landscapes or gardens.



Bleeding holes in the trunk of a Jacaranda tree that was suspected to have been poisoned.



Bleeding holes in the trunk of a Jacaranda tree that was suspected to have been poisoned.



Fruiting bodies (fungal brackets) give a clear indication of the soil conditions present.



# Greener. Stronger. Healthier.

**TREE HEALTH SCORING**

Our specialists are trained to provide you accurate and informed information on the health and status of your trees. Ranging along a scale from Excellent Health to Dead, we provide you with the knowledge and understanding to make the correct decisions when they matter most!

## EXCELLENT HEALTH

A tree given this score is often regarded as being in perfect condition, with a sufficient ballance of nutrients and no environmental stressors present which also includes the absence of any diseases or pests. Trees in this state often have a rich, colourful crown of foliage that covers the entire canopy.



## GOOD HEALTH

A tree given this score can be considered to be healthy but with room for improvement. They have a full but slightly unbalanced crown in some areas that covers most of, if not the entire canopy. The foilage is a good, healthy size and colour and there is often minimal to no pathogens or pest damage present.



## FAIR HEALTH

A tree in this state has a generally unbalanced crown of foilage that, while generally showing good colour and size, is struggling overall. This can usually be the result of pathogenic or pest infestations. Another big sign is if the tree has deadwood, or branches that have died off, present.



## POOR HEALTH

Unbalanced crown, with leaves showing clear signs of abiotic stressors. Usually disformed and of poor colour and consistancy. Foilage is very sparse and covers very little of the canopy. Tree also likely includes >30% deadwood branches.



## DECEASED

The tree has expired. The deadwood now poses a risk to both people and property alike. Falling branches and limbs can injure those beneath them while also damaging property. Meanwhile the trunk could potentially become the host to termites while the roots will prevent the growth of anything new. It will need to be removed.



# Pathogens & Remediation.

**PATHOLOGY TESTING**

Pathogens such as fungi, bacteria, and viruses can severely damage plants when left undiagnosed and untreated. Our comprehensive external lab specializes in identifying and managing plant diseases through a combination of laboratory testing and field analysis.

We collect plant samples for microscopic examination, run laboratory cultures externally, and use molecular techniques to pinpoint the specific pathogens responsible for disease.

Pathology tests help identify the cause of ailing trees, which in turns helps our team of specialist's hand tailor customised treatments to combat the pathogen while also preventing it from spreading to other plants.

**REMEDICATION PLANNING**

For landscapes facing complex health challenges such as soil contamination, pest infestations, or disease outbreaks, our Remediation Plans provide a strategic roadmap to recovery. The goal of these plans is to restore the health and vitality of your landscape through sustainable, long-term solutions hand-tailored to your specific needs.

Many failed street side tree plantings and trees found to be in decline area usually the direct result of the impact of sustained abiotic and biotic stressors not being correctly managed. One of the stressors that impact the growth and health of trees is soil compaction, which restricts the flow of air and water through the soil which slowly starves and suffocates a tree and hinders its growth. Compacted soil can often be decompacted with professional tools that help aerate it. This ends up promoting the flow of water and air, as well as root growth.

We use a variety of different organic materials and fertilizers based on the analysis of our soil tests. Custom blends are mixed and applied specifically for the needs of each site to promote healthy plant growth and reduce the risks from pests and diseases.



Preparations for the retrieval of soil samples along with a visual inspection of the soil layers.



Fruiting bodies of a wood decay fungi. These fungi usually appear on the lower stems of trees or at points of damage where the tree is weak.



A mature fig tree in decline showing clear symptoms of wood decay in it's buttress.

**The Fungi Did It!**

Fungi are often times the most common culprit of tree die-back. The most common diseases that affect trees are often fungal and usually attack their hosts through wounds on their surface or weakened areas of the trees, causing rot in some specific cases.



Plant Health Care crew performing soil treatment as part of a greater remediation plan.



# Protection Orders & TPZ's.

**VEGETATION PROTECTION ORDER (VPO)**

Vegetation Protection Orders (VPOs) are used by authorities to apply legal protection to individual or groups of trees from being removed, damaged or otherwise altered without first receiving strict approval from council. These are usually issued to help preserve trees that possess significant value to their environment due to their health, size, species, ecological contribution, historical importance or aesthetical value. VPO's can be applied for through the Brisbane City Council website, which protects them from being removed or harmed by law. In Queensland, vegetation protected under the Natural Assets Local Law 2003 (NALL) fall into one of four (4) categories:

**[DARK ORANGE]** Council Vegetation: Vegetation on land that is owned, controlled or otherwise occupied by Council is protected.

**[BLUE]** Waterway & Wetland Vegetation: Waterways and wetlands can be either naturally formed or man-made and may be both freshwater or saltwater.

**[LIGHT ORANGE]** Significant Urban Vegetation: Native and Exotic vegetation on private property that is mature and/or prominent in the landscape may fall under the protection of NALL.

**[GREEN]** Significant Native Vegetation: This includes native vegetation ranging from small ground covers and native grasses to large trees.



A map that showcases registered tree protection zones within the city of Brisbane.



Fencing set up to protect the TPZ around this tree from ongoing development.



A short rail set up to protect the tree while it undergoes remediation treatment.

**TREE PROTECTION ZONE (TPZ)**

Trees are a vital aspect of our natural environments and play integral roles in the aesthetic appeal of our parks and greenspaces which is why we have a responsibility to ensure that no harm befalls them when urban development and construction is undertaken nearby. Tree Protection Zones (TPZs) are designated areas that surround trees, protecting them from disturbances and damage during construction, development or otherwise any kind of planned activities that pose a risk to the tree in question. The TPZ acts as a buffer to shield the tree from receiving damage to its roots, trunk or canopy and can vary wildly depending on both the size, type and shape of the tree.

**HOW IS THE TPZ CALCULATED?**

Typically, the TPZ for a specific tree is calculated using either the tree's drip line, which is the outer edge of its canopy, or a formula based on the diameter of the tree's trunk at breast height (DBH). The common standard of practice is to create a buffer zone that extends 1.5 times the DBH or the drip line, whichever is greater, which will then become the TPZ for that specific tree.

**WHAT IS THE STRUCTURAL ROOT ZONE (SRZ)?**

The Structural Root Zone (SRZ) is a fundamental part of a TPZ and is the area of roots around the trees that are considered vital for the tree's ongoing structural integrity. While a much larger area is required to maintain a viable tree, the structural root zone is considered critically important for the structure of the tree to remain upright and sturdy.

# Sonic Tomography.

**SONIC TOMOGRAPHY**

Sonic Tomograph Testing is a non-invasive diagnostic test that is frequently used to assess the internal structure, condition and integrity of trees. This method allows arborists to detect potentially dangerous weaknesses in the core of the tree without having to damage its bark or structure. It is particularly useful for identifying rot or decay and the severity of it to determine whether a tree is in danger of failure.

**HOW SONIC TOMOGRAPHY WORKS**

The principle behind sonic tomography is based on how sound waves travel at different speeds through materials depending on their density and structure. In healthy trees the sound waves should travel throughout the structure of the trunk at a steady speed, while those that are experiencing decay, have cavities or internal damage will have the sound waves slow down or scatter entirely.

Arborists will place multiple sensors around the trunk of the tree or in the area of interest, such as the limb of the tree or it's branches. They will then send several sound pulses throughout the tree, which are picked up by each of the sensors. The time it takes for each sound pulse to reach each sensor is then measured and processed by a program that generates a tomographic image of the tree's internal structure. This image is what helps arborists identify flaws or weaknesses in the core of the tree.

Sonic Tomography works best on trees with relatively homogenous structures. Those with highly irregular growth patterns or dense, knotty wood are far more difficult to assess with this method.

**SONIC TOMOGRAPHY**

Sonic Tomograph Testing is a non-invasive diagnostic test that is frequently used to assess the internal structure, condition and integrity of trees. This method allows arborists to detect potentially dangerous weaknesses in the core of the tree without having to damage its bark or structure. It is particularly useful for identifying rot or decay and the severity of it to determine whether a tree is in danger of failure.

**The Advantages**

*A limited-invasive procedure, causing little-to-no long-term damage to the tree's structure or health*

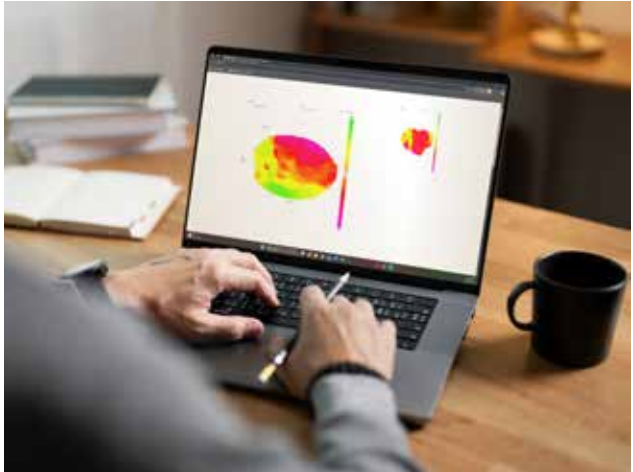
*Capable of detecting structural flaws deep within the tree such as cavities.*

*Can accurately pinpoint points of failure or damage with extreme precision, ensuring that any treatment or remediation plans are focused on the right area.*

*The mapping of the most likely points of failure can help protect people and property around the tree from sudden structural failure.*



A sonic tomography setup and test as seen from the outside of the tree.



The digital rendering of a tomographic map of the above tree. The colours indicate the density of the wood and therefore whether it has any cavities within.



An arborist fixes the tomograph nodes in place, preparing to make an assessment on whether the tree has any cavities of structural weakness' inside.



# Porous Paving

## STONE RESIN PRODUCTS

Resin bound products can be installed on various subbases including; concrete, asphalt, road base and tiles. Each of these surfaces provide a stable foundation for any of our products, maintaining peak performance and durability in high traffic areas such as driveways, patios and garden paths. It's highly porous nature makes it a highly sort after material for pool surrounds to ensure spillage is kept to a minimum!



## KEY FEATURES

- **Slip Resistant!** No matter how wet it gets, maintains maximum traction when walked on! Making for a safer environment for children and the elderly!
- **Highly Durable!** Resistant to cracking and therefore ideal for high traffic areas!
- Massive surface porosity of **up to 1,000 litres per min per sqm!** No more flooded surfaces!
- Available in a wide range of colours and finishes, adaptable to any home environment!
- **Low Maintenance!** Easy to clean, hard to damage! Porous Paving has an extremely low maintenance requirement!
- Quick & Easy Installation! Fast installation with **immediate usability once cured!**
- **Temperature Resistant!** Able to handle the summer heat and winter cold without cracking!



**Slip Resistant**



**Secure Draining**



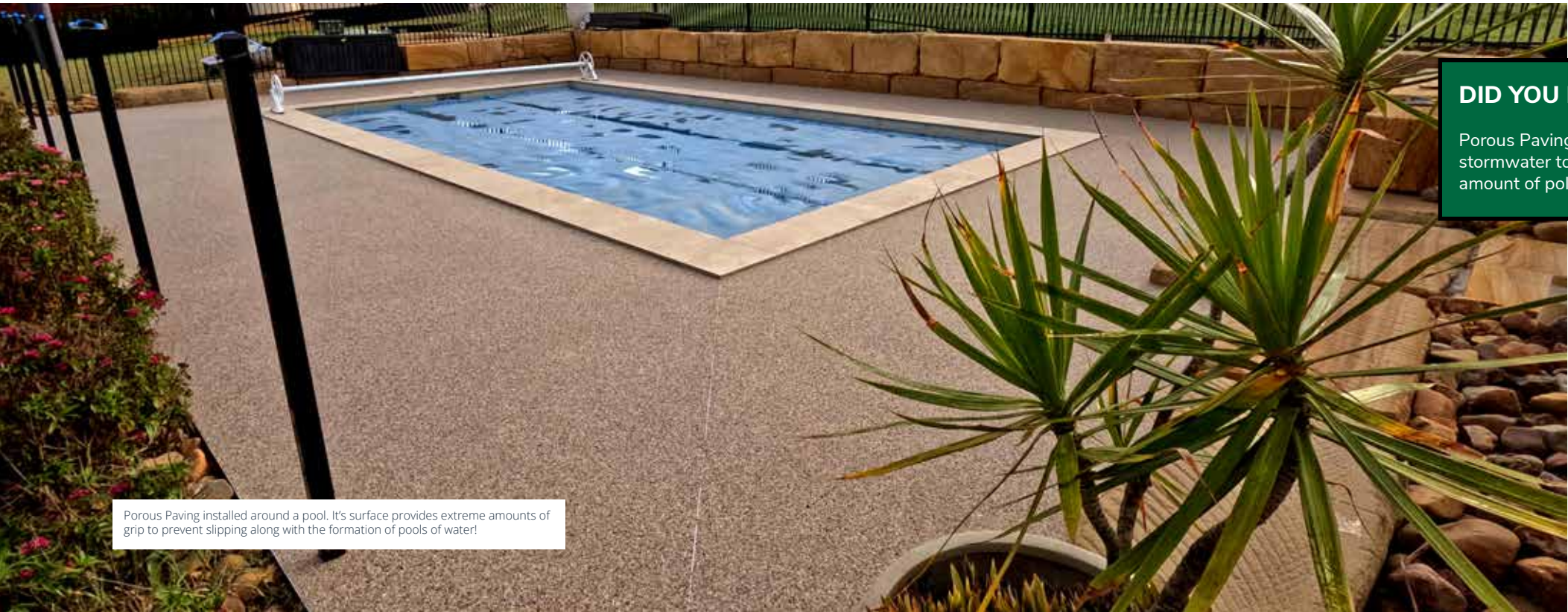
**Easy Maintenance**



**Temperature Resistant**



**Long Term Sustainability**



Porous Paving installed around a pool. It's surface provides extreme amounts of grip to prevent slipping along with the formation of pools of water!

# The Ideal Choice For Pools!

Porous Paving is highly adaptable to its environment. With a wide range of materials and finishes available to pick from, you can be sure that there is a style that fits your home! Whether you choose from our range of river pebble, quartz or marble; Porous Paving can enhance the aesthetic appeal of pool surrounds, driveways, patios rooftops and playgrounds! Its flexibility makes it a practical and attractive solution for both residential and commercial spaces alike.

## THE PERFECT MATERIAL FOR POOL SURROUNDS!

When designing the perfect pool area, aesthetics and functionality are both crucial. Porous Paving not only enhances the appearance of your pool surrounds with its wide range of materials and finishes but also solves a series of other problems that plague the poolside environment at home. From reducing puddles to minimizing heat absorption, it's designed to create a safer and more comfortable outdoor space.

## ADAPTIVE FOR ANY ENVIRONMENT!

Porous Paving also offers several massive advantages over regular tiling when it comes to pool surrounds. Porous materials have substantially higher grip than regular tiles or non-permeable materials, even when wet, which makes it perfect for keeping others safe by preventing slipping! This added safety feature is especially important for households with children or elderly residents who are more prone to falls.



Pool surround with Porous Paving installed. This material allows liquids to freely flow through it, providing a fantastic solution to prevent puddles from forming!



Porous Paving's anti-slip surface is a fantastic choice when children and the elderly are enjoying themselves by the pool without having to fear slipping!

## DID YOU KNOW?

Porous Paving help reduce runoff during the rain season by allowing stormwater to be absorbed into the ground supply. This helps reduce the amount of pollutants that end up being swept into our waterways!



# Arbor Flex

RUBBERISED MULCH-PAVING

This is the product of choice for porous paving in the industry today. It has one of the highest ranges of porosity, highest flexibility and the longest in field useful life expectancy. Our range of porous rubber bound paving is 100% recycled and has proven to be incredibly versatile with its limitless range of uses. Rubber mulch is similar to the safety surfacing that is used in playgrounds and parks to keep your children safe.

KEY FEATURES

- Our most **competitively priced** product, simple but effective!
- High permeability! Tested up to **300 litres per min per sqm** with performance increasing further in high foot traffic areas!
- The dynamic flexibility makes this the **best suited product for tree surrounds!**
- Ideal for placement around trees. Its **flexibility will not suffer from root incursion or natural egress.**
- Can take **large loads** through a recoil disbursement effect of the compressed rubber.



Colours.



Porous Softfall being installed in a playground. This material is incredibly shock absorbant to absorb high energy activities and running while also allowing the free flow of water to prevent water pooling into puddles.

# Arbor-Pave Plus

STONE & RUBBER COMBO

Arbor-Pave Plus is a load bearing, hard wearing, porous paving product that is used for high to medium traffic or load areas. It is made by mixing selected stone and small rubber particles with a special resin polymer to form a dynamic, flexible porous paving system. Impervious paving surfaces such as concrete, asphalt and bitumen, cause detrimental compaction around tree root systems and do not allow for moisture infiltration or aeration of the soils.

KEY FEATURES

- High **anti-slip** properties.
- Surface porosity tested up to **130 litres per minute per sqm.**
- Our **most customisable** product with a wide range of base stone and rubber particles are available!
- **Durable!** The colour will last without fading.
- Structural cell system is used to ensure a flat surface every time! **No trip hazards!**

THE IDEAL CHOICE FOR VEHICLE AND PEDESTRIAN SPACES AT HOME!

Arbor-Pave offers an ideal alternative to asphalt and concrete surfacing especially where sites are subject to high levels of root growth and elevated ground disturbance. Tree roots underneath this type of footpath will continue to grow downwards, following the moisture.



When looks meet functionality! Arbor Pave Plus brings the strengths of Porous Paving and mixes them together with beautiful materials that really emphasise the beauty of the product!

DID YOU KNOW?

Concrete sweats and allows condensation to build up under the surface which in turn encourages rapid fine root growth to develop. This causes the roots of trees to expand and often results in cracking or sheering of the pavement.



# Industry Leaders. **Pioneers.**

**WHO ARE WE?**

Established in 2015, Heritage Vacuum Excavation has become one of the leading Vacuum Excavation companies in Brisbane and beyond! We strive to deliver a professional, qualified and efficient service for our clients, who sit at the heart of our business. We are a 100% Australian-owned company focused on sustainability and preservation, striving to maintain the highest standards of service to bring you the utmost expertise in Potholing, Non-Destructive Digging and Service Locating.

Our team stems from a collection of experienced industry leaders in vacuum excavations which means no matter the size or location of a job, you can be certain that we can deliver a fantastic service!

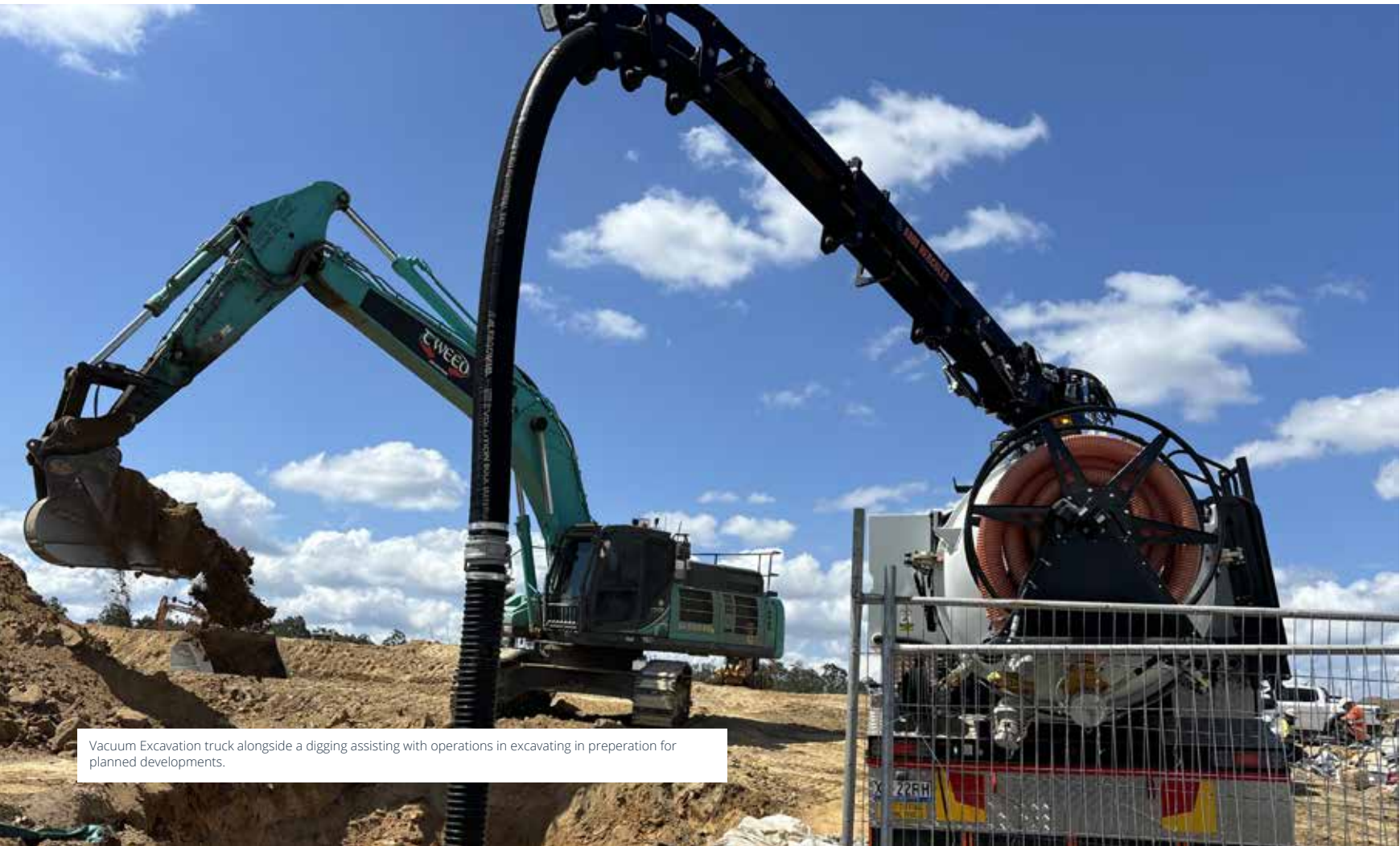
**INDUSTRY KNOWLEDGE & KNOW-HOW!**

Our experienced team of workers are willing to work with your own on-site personnel to achieve your goals and our management team is always available to offer advice and insight to solve tricky situations that might pop up during excavation. Heritage Vacuum Excavations is more than just a subcontractor, we are here to help our clients however we can! With decades of combined industry experience, we bring confidence and competence to every project we're a part of.

**WHY HIRE US?**

Heritage Vacuum Excavations aims to be the leader within the industry, investing in the latest vacuum technology featuring next-generation vacuum trucks.

- Our extensive range of services and state-of-the-art equipment means we can get your job done no matter the size!
- ISO 9001, 14001 & 45001 accredited. Our team adhere to a strict international standard that ensures a safe and efficient worksite.
- Full time OH&S ensures that on-site dangers are treated with caution, focusing on the safety and wellbeing of our personnel and clients.
- Heritage Vacuum Excavations boasts a full and comprehensive insurance plan to help mitigate the fallout from any potential onsite accidents.



Vacuum Excavation truck alongside a digging assisting with operations in excavating in preperation for planned developments.

# Capable. Reliable. **Effective.**

**MODERN EQUIPMENT**

Modern work environments require modern equipment to tackle the job correctly! Our state-of-the-art fleet of vacuum excavators and diggers help tackle any kind of job no matter how big or complicated it may be. Each machine is regularly maintained and upgraded to ensure maximum efficiency and minimal downtime on the job.

Our teams are capable of conducting a wide range of jobs for you. Anywhere from potholing and service locating to vacuum excavation, waste disposal and even traffic control! Whatever the need, we offer a tailored solution to suit your specific project requirements.

**TIME MATTERS**

Heritage Vacuum Excavations understands that time is one of our clients' most valuable resources and we make every effort to ensure that we value that time. We are committed to delivering punctual and reliable services to ensure that your projects remain on time and on track! We understand that delays can be very costly which is why we strive to exceed all expectations with every service we provide!



Vacuum Excavation operators under-taking service locating operations to assist local developers in avoiding striking underground utilities as they work!







heritageenvironmental  
services



**HERITAGETREECARE.COM.AU**



1800 353 053



(07) 3715 5444



sales@heritagetreecare.com.au