

TREE WATERING CAMPAIGN 2026

PLANTING IS THE EASY HALF.

A street tree costs £1,500 to £3,000 to source, plant and secure.
Keeping it alive through its first three summers costs a fraction of that
— and it is the part most programmes have no plan for.

FOR TREE OFFICERS, PARKS AND GROUNDS TEAMS, HIGHWAYS AND LANDSCAPE CONTRACT MANAGERS



We don't only want to help you find the right equipment for tree establishment — we want to arm you with the knowledge and the best practice to get the most out of it.

We work with a lot of councils, contractors and estates facing the same problem: more trees going in the ground every year, hotter and drier summers, and no more staff. These resources have been useful to them, whether or not you end up buying anything from us.

KERSTEN UK

01

KERSTEN ARTICLE

SAVING OUR STREETS: PROTECTING THE £1 BILLION TREE INVESTMENT

Why the establishment window matters, what the published watering benchmarks are, and how measured, traceable watering protects a planting programme. It also compares the FS 3000 and HTG 4000 in an urban tree context.

kerstenuk.com/blog - Saving Our Streets

02

SECTOR GUIDANCE

LTOA AND ARBORICULTURAL ASSOCIATION WATERING BENCHMARKS

The London Tree Officers Association and the Arboricultural Association publish practical guidance on quantity and frequency during establishment. BS 8545, *Trees: from nursery to independence in the landscape*, is the standard that covers aftercare in full.

[Ask us for the reference list](#)

03

EQUIPMENT REFERENCE

KERSTEN WATERING ARMS

Published specifications, accessory hubs, spare-parts documentation and the compatibility centre, so a carrier can be checked before anything is quoted.

kerstenuk.com/Kersten-Tractor-Mounted-Watering-Arms-for-Compact-Tractors

04

YOUR OWN NUMBERS

A ROUTE ASSESSMENT

Send us the number of trees, the target dose per tree, your carrier and hydraulic services, tank and pump details and the route constraints, and we will work through a practical configuration with you before you specify anything.

kerstenuk.com/Contact-us-2

WHAT THE REST OF THIS PACK COVERS

The evidence on urban tree losses, the duties and grant conditions that make aftercare a requirement rather than a nicety, what a young tree actually needs, how to build a watering round that fits the working day, then the equipment — and how the same carrier and bowser can earn its keep for the rest of the year.

Product recommendations come last, and only after a conversation about your sites.

FREE DEMONSTRATION

Reach around parked cars and street furniture is impossible to judge from a specification sheet.

We are happy to demonstrate on your own street, at no cost.

THE COMMITMENT, AND THE LOSS

The UK is in the middle of one of its most ambitious planting programmes, with over £1 billion allocated during this parliament to tree planting and forestry, new National Forests and expanded urban canopies. The planting is going well. The survival is not.

£1bn

ALLOCATED THIS PARLIAMENT
TO TREE PLANTING AND
FORESTRY

30-50%

FAILURE RATES SUGGESTED
FOR NEWLY PLANTED URBAN
TREES IN THE FIRST FEW
YEARS

3 yrs

THE CRITICAL
ESTABLISHMENT WINDOW IN
UK CONDITIONS

£1,500- £3,000

TO SOURCE, PLANT AND
SECURE A SINGLE STREET
TREE

WHAT THE RECENT INVESTIGATIONS FOUND

A *HortWeek* investigation into trees planted by councils found high death rates, attributed to drought, vandalism and lack of maintenance. Tree experts responding to it made the same two points: trees need maintenance or they will die, and heavier nursery stock tends to do better.

It is not an isolated finding. In 2023 it was reported that some 400,000 trees planted as part of roadwork schemes had died, with commentators noting that organisations were still focusing on how many trees go in the ground rather than on the aftercare that keeps them there.



DROUGHT IS THE PRINCIPAL KILLER

Not vandalism, and not disease. Research cited by bodies including the Forestry Commission and Fund4Trees puts urban failure rates at 30% to 50% in the first few years, with drought stress the dominant cause. Applied to the current national investment, that is hundreds of millions of pounds of public money at risk.

AND THE LOSSES ARRIVE LATE

A tree stressed in one hot summer often dies one to three years later, once depleted reserves, reduced root mass and secondary pests have done their work. Mortality figures therefore lag the drought that caused them — which is why a good season is not evidence that the programme is working.

Figures on this page are drawn from published sources and are quoted as such: the £1 billion allocation and the £1,500–£3,000 planting cost from Kersten's own article, the 30–50% failure range from research cited by the Forestry Commission and Fund4Trees, the council findings from *HortWeek*, and the roadworks figure from 2023 reporting. They describe the sector, not your authority. Your own planting and replacement records are the better guide.

Watering is easy to treat as discretionary because it has no dedicated statutory duty of its own. In practice it is written into several obligations an authority has already accepted — most explicitly in planning policy.

PLANNING POLICY · ENGLAND

NPPF · TREE-LINED STREETS

Policies and decisions should ensure new streets are tree-lined and that **appropriate measures are in place to secure the long-term maintenance of newly-planted trees**. Inspectors have refused landscaping schemes by reference to this policy.

This is the clearest statement in national policy that planting without an aftercare arrangement is not compliant.

GRANT AND SCHEME CONDITIONS

PLANTING FUNDS AND BNG

Planting grants commonly carry survival expectations and maintenance payments. Where trees form part of a biodiversity net gain habitat, the secured plan runs for thirty years with monitoring built in.

A dead tree is then not just a loss — it is a shortfall against a plan someone will audit.

THE STANDARD

BS 8545

Trees: from nursery to independence in the landscape sets out the establishment process, including irrigation, through to the point at which a tree no longer needs support. It is the reference a specification should be written against.

Independence is a defined end point, not a hopeful assumption.

BIODIVERSITY DUTY

ENVIRONMENT ACT 2021

Public authorities in England must consider what they can do to conserve and enhance biodiversity, and there are consultation requirements before felling street trees. Canopy targets and Local Nature Recovery Strategies sit alongside.

Replacing a tree you failed to water is a poor answer to a canopy commitment.

HIGHWAY TREES

HIGHWAYS ACT 1980

Authorities have powers to plant and maintain trees in the highway, and the ordinary duties around obstruction and safe passage apply to what grows there — including a dying tree that becomes a hazard.

Removal, stump grinding and reinstatement all cost more than the watering visits would have.

WATER RESTRICTIONS

TEMPORARY USE BANS

Water companies typically exempt newly planted trees, generally up to around three years old, from hosepipe restrictions — the period when watering matters most. Confirm the current wording with your own supplier before the season.

A drought order is not a reason to stop; it is usually the reason to start.

THE QUESTION THAT GETS ASKED WHEN A TREE FAILS

Not whether it was hot, but whether it was maintained. Members, grant bodies and — where a contractor planted it — the other party to the contract will all ask the same thing, and the answer needs to be a record rather than a recollection. Section 07 covers what that record can look like. This page is a summary for discussion and not legal advice; confirm the obligations, grant conditions and contract terms that apply to your own programme.

A newly planted tree is, in effect, a container plant buried in the ground. Its roots occupy the root ball and little else, so it can only draw on the water in that small volume until it grows out into the surrounding soil.

In UK conditions that takes about three years. Until then the tree depends on what falls into, or is poured into, the pit — and a street tree pit is usually surrounded by sealed surface that sheds rainfall rather than delivering it.

Climate has changed the arithmetic. Summers are hotter and drier, with 40°C peaks recorded in 2022, and groundwater fluctuates more. The establishment period has not got shorter; the conditions during it have got harder.



PUBLISHED BENCHMARKS · LTOA AND ARBORICULTURAL ASSOCIATION

YEARS 1-3 · QUANTITY

50-100 litres

Per watering, depending on tree size and pit volume. A larger nursery standard in a large pit needs the upper end.

YEARS 1-3 · FREQUENCY

Weekly

Through the growing season, May to September, increasing to twice weekly during drought alerts.

YEAR 4 ONWARDS

Rainfall

Generally tolerant of natural rainfall once independent, though veteran and recently stressed trees may need support in extreme heat.

VOLUME IS ONLY HALF OF IT

Water has to percolate down into the root ball, not run across the surface and into the gutter. A soft shower head delivers gently enough to soak in; a hard jet displaces mulch, scours the pit and can leave the tree no better off while the tank empties at the same rate.

A LITTLE AND OFTEN IS THE WRONG INSTINCT

Frequent light watering encourages shallow rooting exactly where the soil dries fastest. The benchmarks are built around a substantial dose at a weekly interval, which draws roots down and outward — which is what independence actually means.

The benchmark tells you what one tree needs. The round tells you whether you can deliver it. Most programmes fail here rather than at the specification: the dose is right, the arithmetic was never done, and by July the rounds are three weeks apart.

WORK IT THROUGH BEFORE THE SEASON, NOT DURING IT

STEP	WORKED EXAMPLE	WHY IT MATTERS
TREES IN ESTABLISHMENT Years 1–3 only	500 trees	Only trees inside the window need the round. Anything older comes off the list, which is why planting dates have to be recorded.
DOSE PER TREE	75 litres	Set from tree size and pit volume, within the 50–100 litre benchmark. Write it into the specification so it is not left to the operator.
LITRES PER FULL PASS	37,500 litres	Trees × dose. This is the number that determines everything downstream.
REFILLS PER PASS	13 at 3,000 L	Tank capacity divided into the pass. Each refill is travel plus fill time, and it is usually the largest single loss in the day.
PASSES PER SEASON	About 22	Weekly from May to September, more during drought alerts. Multiply the pass cost by this to get the true seasonal figure.
PRODUCTIVE FIELD DAYS	Your own figure	Weather, access, parked cars, staff availability and competing work all reduce it. Establish it in year one and plan the following year against it.

Illustrative arithmetic to show the shape of the calculation, not a recommendation. Substitute your own tree numbers, dose, tank capacity and refill points.

REFILLING DECIDES THE DAY

The lesson is the same one that governs hot water weeding: water supply, not machine output, sets the achievable round. If the bowser travels far between fills, refill and travel time can dominate the shift and make any figure quoted in trees per hour meaningless.

Record treatment time, refill time and travel time separately from the first day. It costs nothing and it tells you whether the answer is a larger tank, a second filling point, a different route order — or simply an earlier start.

ORDER THE ROUND BY NEED

Not by geography alone. Sort by planting date and exposure first, then optimise the driving. A first-year tree in a sealed pit on a south-facing street is a different asset from a third-year tree in a verge, and treating them as one round is how the vulnerable ones get missed when the day runs short.

The gain is not simply reach. It is the ability to place water accurately from a mobile carrier, with the operator in the cab, and to repeat the same dose at every asset on the round.



REACH OVER KERBS AND BEHIND PARKED VEHICLES



FOUR ARM MOVEMENTS, CONTROLLED FROM THE SEAT

ITEM	KEY FIGURES	WHERE IT FITS
FS 3000 WATERING ARM	3,500 mm arm reach · up to 7,000 mm spray coverage · four hydraulic movements · 177 kg basic unit	The published Kersten arm for sub-compact and compact tractors. Street trees, tree pits, beds, planters and rain gardens.
HTG 4000 RANGE	Kersten's article describes 8 m reach and a 50 L/min pump configuration	The heavier-duty route for high-output programmes and more difficult access. Confirm carrier, tank and full specification.
FLOW CONTROL WITH PUMP	Three preset volumes · tank-content monitoring · online GPS position and watering records	Where every watering event needs to be controlled and recorded – contract delivery, grant-funded planting and disputed failures.
POWERJET NOZZLE	Power-jet, cone and mist settings, manually adjustable	Work needing more control than a soft shower pattern. The brass shower head remains the choice for sensitive root zones.
180° HYDRAULIC SWIVEL	Delivery head positioned either side of the carrier	Working both kerbs on a route without turning the vehicle, which is often what makes a street practical at all.

A watering arm is not a complete system on its own: brackets, nozzle, controls, pump, tank, hoses, electrical work, delivery and commissioning all form part of the specification. Full range: kerstenuk.com/tractor-mounted-watering-arm

WHO IT SUITS

Council street-tree teams reaching pits across kerbs and parked vehicles; parks, cemeteries and town centres moving between beds, baskets and planters; estates using an existing compact tractor as a seasonal irrigation platform; and contractors who need a repeatable route with auditable completion records.

CHOOSE THE HEAD, NOT JUST THE ARM

The soft brass shower head suits sensitive root zones and newly mulched pits. The PowerJet gives stream, cone or mist where the target is further away or the delivery needs more direction. Both matter more to the outcome than another metre of reach.

SPECIFYING THE COMPLETE SYSTEM

The arm is the visible part. Carrier, bracket, hydraulics, controls, pump, tank, hose routing and nozzle all have to be resolved together, because the wrong combination produces a machine that reaches the tree and cannot deliver to it.

01

CARRIER AND MOUNTING

Confirm the exact tractor, mounting position and frame before selecting the arm.

- Cat. 1 / Cat. 1N or municipal interface
- Front axle load, ballast and stability
- Folded height and transport envelope
- Visibility and operator sight lines

02

HYDRAULICS AND CONTROL

The FS 3000 requires four double-acting hydraulic services unless an appropriate control package is specified.

- Tractor flow and pressure
- Electric control box or radio remote
- Flow-control valve where required
- Electrical supply for controls and reporting

03

WATER SOURCE AND DELIVERY

Tank, pump, dose and refill logistics must match the number of assets on the route.

- Litres per tree and total shift demand
- Refill points along the route
- Pump capacity, filtration and hose size
- Water quality, tank hygiene and backflow controls

RESPONSIBLE OPERATION · A LONG HYDRAULIC ARM BESIDE A LIVE STREET

- | | |
|--|--|
| ✓ Trained operators, with hoses, pins, controls and locking points inspected before work | ✓ Exclusion zone or traffic management where the arm enters public or vehicle space |
| ✓ Axle loads, ballast and stability confirmed with the tank full and the arm at full outreach | ✓ Arm folded, secured and verified in transport position before road travel |
| ✓ Clearance maintained from people, traffic, buildings, overhead services and street furniture | ✓ Pressure and flow controlled to avoid soil washout, runoff or water entering the carriageway |

ASK FOR A FITMENT REVIEW, NOT A QUOTATION

Send the carrier make, model and mounting interface, the hydraulic services available, the tank and pump arrangement, the number of assets, the target litres per asset, the route constraints and whether reporting is required. That is enough for a practical configuration review — and it catches the problems that are expensive to discover after delivery. Manufacturer instructions and a task-specific risk assessment remain controlling in all cases.

MEASURED DOSING AND THE AUDIT TRAIL

When a tree fails, the question is whether it was maintained properly. A hose and a memory are not an answer. A recorded dose, at a recorded position, on a recorded date, is.

The Flow Control package automates defined quantities: three preset volumes, automatic shut-off once the dose is delivered, and monitoring of adjustable tank content. The operator stops guessing, and every tree on the round receives exactly what the specification requires.

The reporting side records the position, time and quantity dispensed to the cloud, viewable on a map or as a data table. That converts a maintenance activity into evidence.



WHAT THE RECORD IS WORTH, AND TO WHOM

TO THE AUTHORITY

Assurance

Demonstrable compliance with the maintenance measures that planning policy, grant conditions and a BNG plan all assume are in place.

TO THE CONTRACTOR

Payment

Indisputable evidence that the schedule was followed, which protects both revenue and reputation when a planting fails for reasons outside your control.

TO THE PROGRAMME

Learning

A dataset that shows which sites needed more water, which species struggled and where the round ran short – so the following year is planned rather than repeated.

ZERO WASTE, BY DESIGN

Water is a constrained resource and increasingly a scrutinised one. A system that shuts off at a preset volume delivers the specification and no more, which matters both to the tank logistics and to the conversation about watering during a drought order.

RECORD WHAT YOU WOULD WANT IN A DISPUTE

Location, date, time, volume, and the tree's planting year. Add a note field for anything the operator saw – a damaged stake, a missing grille, a pit that will not take water. The observations are often worth as much as the dose data.

A watering round runs from May to September. On its own, that is a machine and a bowser standing idle for more than half the year – which is exactly the objection a capital panel will raise. The answer is that the same water, the same tank and the same carrier do two other jobs.



THE SAME TANK, HEATED

WATERING, WEEDING AND WASHING FROM ONE SYSTEM

The Eco Weedkiller Pro range – the Pro 10 and the Pro 20 Dual – heats water on demand at 99–101°C for non-chemical weed control, runs hoses up to 80 metres, and supports one or two operators with continuous refilling. The Pro 20 offers selectable 10 or 20 litres per minute, reaching the higher output with two users.

The same units are specified for pressure washing and cleaning work. Combine that with a watering round and a single bowser-and-carrier investment covers non-chemical weed control through the growing season, tree establishment through the summer, and hard-surface cleaning across the rest of the year.

SEASON	JOB	WHAT THE SYSTEM DOES
SPRING	Non-chemical weed control	Hot water treatment on hard surfaces and joints, most efficient when growth is young and the surface has already been mechanically reset.
SUMMER	Tree and planter watering	The watering round: measured doses at recorded positions, weekly through the establishment window, twice weekly during drought alerts.
AUTUMN AND WINTER	Pressure washing and cleaning	Hard-surface cleaning, street furniture, signage, depot and yard work – using the same pump, hoses and vehicle.

Configuration matters: tank, pump, heating, hose and nozzle requirements differ between the three duties, and a system specified for one may need additional components for the others. Ask for the combined specification up front rather than adding to it later.

THIS IS USUALLY THE ARGUMENT THAT WINS THE CAPITAL CASE

A watering arm justified only by summer tree rounds is a seasonal asset. The same carrier, tank and pump justified across weed control, tree establishment and surface cleaning is a year-round one – and the business case stops depending on any single service's budget. It is the same logic that makes a pedestrian power unit worth buying: utilisation across seasons, not performance in one.

THE COST OF LOSING A TREE

A failed street tree is not a £1,500 loss. It is the planting cost, plus the removal, plus the replacement, plus the years of canopy the site does not have while the replacement establishes — and, increasingly, an explanation owed to whoever funded it.

WHAT A FAILURE ACTUALLY COSTS

COST ELEMENT	INDICATIVE	NOTES
ORIGINAL PLANTING	£1,500–£3,000	Sourcing, planting and securing a street tree, including pit, crate and topsoil. Already spent.
REMOVAL AND REINSTATEMENT	Your own rate	Take-down, stump grinding, disposal, and making the pit or surface safe. Often a separate budget from the one that planted it.
REPLACEMENT PLANTING	£1,500–£3,000	The same cost again, at current prices, for a tree that starts its own three-year establishment window from zero.
LOST CANOPY YEARS	Not costed	Shade, cooling, interception and amenity that the site does not receive during the gap. It appears in canopy-cover reporting, not in a ledger.
GRANT AND SCHEME EXPOSURE	Scheme dependent	Survival expectations, maintenance payments and BNG monitoring obligations may all be affected. Check the conditions attached to your own funding.

Planting cost range as published by Kersten; every other line should be filled in from your own rates and funding conditions. The point is the shape of the total, not the precision of any figure in it.

AGAINST THE COST OF A VISIT

Twenty-two weekly passes over a growing season, on a round covering hundreds of trees from one vehicle, works out at a few pounds of labour, fuel and water per tree per year. Three seasons of that is a small fraction of a single replacement.

The arithmetic is not close, which is why the argument is rarely about whether watering is worth doing. It is about whether the round can actually be delivered with the staff available — and that is a question about equipment and route design rather than about horticulture.

PUT IT IN ONE SENTENCE

Don't let a £3,000 asset die for want of a £5 watering visit. It is a blunt way to open a committee paper, and it is the whole business case.

THREE THINGS TO ESTABLISH IN THE FIRST SEASON

The number of trees genuinely inside the establishment window, which usually turns out to be smaller than the planting total and makes the round more affordable than expected. The real productive field days, once weather, access and competing work are counted. And the actual litres delivered per tree, measured rather than assumed — because that is the figure that turns next year's plan from an estimate into a schedule, and the one that answers the question if a tree fails anyway.

01

LIST THE TREES IN WINDOW

Planting date, size, pit type and exposure for everything in years one to three. This is the round, and it is usually shorter than the planting list suggests.

02

DO THE ROUND ARITHMETIC

Dose, litres per pass, refills, passes per season and productive field days, using Section 04. It takes an afternoon and it decides the specification.

03

FITMENT REVIEW

Send us the carrier, hydraulic services, tank and pump details. We confirm what will physically work before anything is quoted.

04

FREE DEMONSTRATION

Reach, spray pattern, stability and route time proved on your own street, with your own operators. No charge and no obligation.

WHERE TO READ MORE

1

WATERING ARMS FOR COMPACT TRACTORS

kerstenuk.com/Kersten-Tractor-Mounted-Watering-Arms-for-Compact-Tractors

2

ALL WATERING ARM PRODUCTS

kerstenuk.com/tractor-mounted-watering-arm

3

HOT WATER WEED CONTROL

kerstenuk.com/Eco-Weedkiller-Hot-Water-Weed-Management

4

ATTACHMENT COMPATIBILITY CENTRE

kerstenuk.com/Kersten-Machine-Attachment-Compatibility-Centre

5

BOOK A DEMONSTRATION

kerstenuk.com/Book-a-Demonstration-of-a-Kersten-Machine

6

TRACTOR ATTACHMENTS CATALOGUE

kerstenuk.com/kersten-tractor-attachments

We wish you every success, and hope these resources help you achieve what you are aiming for – whether you choose to buy from us or not.

YOUR LOCAL KERSTEN DEALER

Supply, fitting, demonstration and servicing are arranged through your local dealer.

DEALER STAMP OR CONTACT DETAILS

Kersten
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