GROWING GREEN

WATER RESILIENCE GUIDE

Managing water risks and reducing costs for growers and food producers

A collaboration between:

GROWING KENT & MEDWAY

Kent County Council kent.gov.uk

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Executive Summary

Securing Water Supplies for Kent Producers

As the Southeast faces its most significant water security challenges in decades, building resilience into Kent's food systems is no longer optional for commercial survival. Unreliable water supplies and rising costs pose a real threat to producers. This guide provides a practical roadmap to help your business reduce its reliance on the mains and build long-term water resilience.

The Business Case:
The Climate Threat to Kent's Food System

According to recent estimates, summer rainfall in Kent and Medway is projected to decrease by up to 30% over the coming two decades.[1] For one of the driest regions in the UK (Figure 1), decreased summer rainfall represents an existential threat to high-water consuming industries, including horticulture and food and drink manufacturing.

That may seem extreme – Kent is the Garden of England after all – but over-reliance on vast chalk aquifers for our water supply is becoming an important vulnerability in a changing climate. Aquifers are natural rock formations that act as underground reservoirs, providing seventy percent of the Southeast's water supply: more than any other region in the UK.[2]

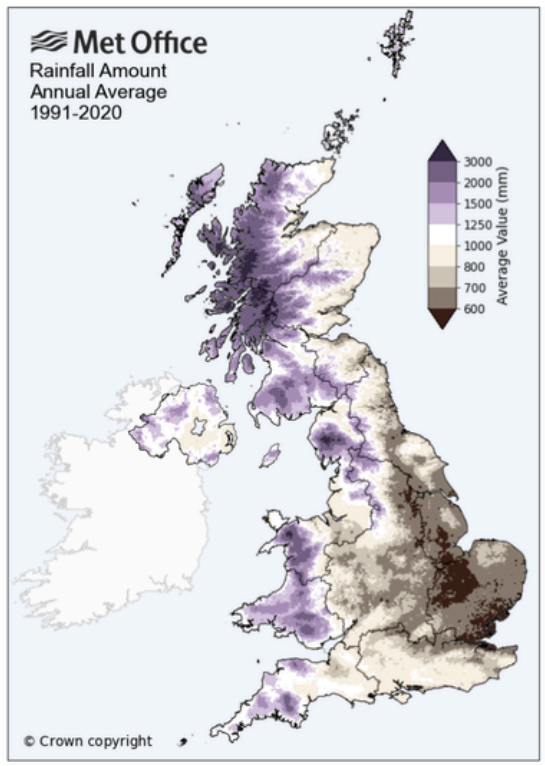

Figure 1. Annual average rainfall amounts in the UK between 1991 and 2020. The Thames Estuary in Southeast England is one of the driest regions of the UK, receiving <600 ml per year. Source: Met Office, How much does it rain in the UK?

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[1] Kent County Council, Climate Change Risk and Impact Assessment for Kent and Medway Part 1: Methodology and Summary of Findings

[2] Kent County Council, Climate Change Risk and Impact Assessment for Kent and Medway Part 2: Utilities Sector Summary

Beat Rising Water Bills and Future-Proof Your Margins

When these aquifers are unable to service local water demands, our options for alternative supplies are limited. As competition increases, costs for high-water consuming industries will increase in turn.[3] Businesses will either have to accept significantly lower margins or pass increased costs onto their customers.

Food prices have already increased by almost forty percent since 2020 (Figure 2), putting significant pressure on food producers, manufacturers, and consumers. With local water companies increasing annual bills by up to eight percent in 2026,[4] improving water resilience could be your business's best bet for a sustainable and profitable future.

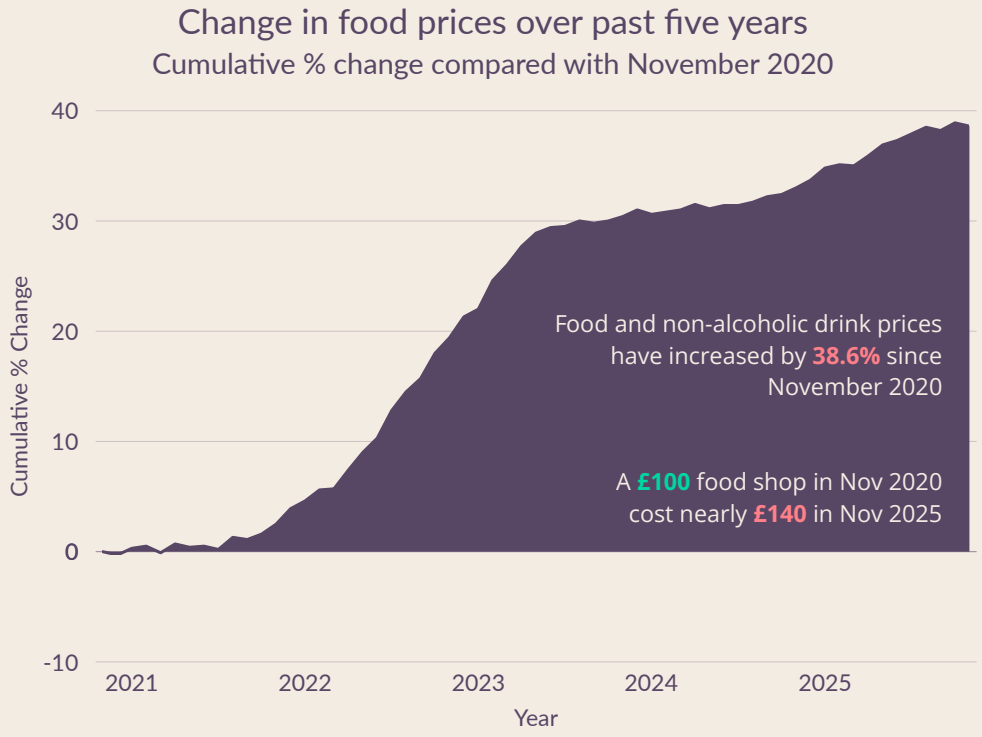

*Figure 2. Changes in food prices between November 2020 and November 2025. *Food and non-alcoholic drink prices, UK CPI measure, monthly data. Source: House of Commons Library, The impact of food inflation on the cost of living.*

Recent supply failures in Kent and Medway highlight the devastating effects water shortages have on our local economy. Hospitality businesses in Tunbridge Wells lost up to £8 million after one week without water in December 2025.[5]

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[3] Kent County Council, Climate Change Risk and Impact Assessment for Kent and Medway Part 2: Utilities Sector Summary
[4] BBC News, Public anger at 'extortionate' rise of water bills
[5] BBC News, Businesses 'potentially lost £8m' in water crisis

A Step-by-Step Roadmap:
Real Examples from Kent & Medway

This guide provides a solution-oriented roadmap towards greater water resilience for your business. Inside, you will find information on how to conduct an audit of your business's water-use efficiency. We also include a checklist of low-cost interventions and a series of inspiring case studies based on successful Growing Green projects.

Growing Green was a sustainability training and small grant programme, developed collaboratively between **Growing Kent & Medway** and **Low Carbon Kent** (Kent County Council).[6]

Overcoming the Costs:
Breaking Down the Barriers to Going Green

We recognise that most UK small businesses are already striving to become more sustainable; 94% have already taken at least one step to reduce their environmental impact.[7] However, we also know that thin margins and a lack of practical information remain significant barriers. This guide exists to break down those barriers.

Since 2021, Growing Kent & Medway has worked with hundreds of innovative founders who are consistently asked to do more with less. We understand that pressure, which is why we lead with low-cost, practical solutions you can implement today. For those ready to go further, our in-depth case studies offer a blueprint for long-term water resilience.

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[6] Growing Kent & Medway, *Reducing the Carbon Footprint of our Food System in Kent and Medway*
[7] British Business Bank, *Smaller businesses and the transition to net zero*

Water Strategy

Stopping the Leaks on Your Bottom Line

Some sustainability changes require extensive investments of time and money, presenting a significant barrier to positive change for many horticultural and food businesses. Fortunately, water resilience offers a unique opportunity to grow a sustainable enterprise by reducing the resources you're paying for, while insulating your business against rising costs.

However, the golden rule of water strategy is simple: optimise before you invest. It is far easier to stop wasting water than it is to build expensive infrastructure to store more of it. The goal of this section is to help you strip out preventable losses first, leaving you with a leak-free production setup ready to be transformed into a resilient asset.

The Power of the Audit

Demystifying a water audit comes down to moving away from abstract carbon footprints and focusing on physical consumption, machinery run-times, and money. For a horticultural or food business, an audit requires just three steps over a standard production week:

1. Map the Flow Paths

Identify exactly where water enters, circulates, or changes states within your facility, growing plots, and wider processing lines.

2. Log the Losses

Quantify what is wasted at each point: whether it is tracking overnight meter activity when closed, checking pipe condensation, or monitoring crop wash cycles.

3. Attach a Cost

Calculate where water is being lost and exactly how much money is spent on those lines, including volumetric rates and standing charges.

Seeing the true financial value of where water is wasted provides the exact data needed to increase water resilience, meet consumer sustainability requirements, and protect your margins. Horticultural, food and drink businesses stand to benefit immensely from this process, especially as sector water use is increasingly competing with domestic supplies.

Immediate Waste ‘Easy Wins’

Before looking at long-term infrastructure, implement these immediate, low-cost process adjustments from our sustainability checklist to stop mains water from being lost in the first place:

- ***Manage Flow Controls***

  Review operational data to adjust your automated facility fittings. Installing simple flow restrictors on staff taps cuts water delivery by 50%, while fitting trigger nozzles to washdown hoses stops water running continuously when left unattended.

- ***Maintain Infrastructure Seals***

  Water waste is often just a symptom of unmonitored infrastructure. Inspecting valves weekly and fixing a tiny 1mm leak saves up to 20,000 litres a month, preventing small drips from turning into a major drain on profit.

- ***Optimise Irrigation Delivery***

  Reduce water use across growing bays by swapping overhead misters for targeted porous hoses or trickle irrigation lines. Delivering moisture directly to root zones allows soil to absorb water efficiently like blotting paper, cutting evaporation losses.

Scaling Up: Turning ‘Easy Wins’ into Long-Term Profit

Reducing water use is an iterative process. Small incremental changes can have a significant long-term impact on your overall water use. And low-cost investments in rainwater harvesting systems that capture and store large volumes of rainfall can drastically reduce the reliance on other water sources.

Researchers at Niab in East Malling have demonstrated how precision technologies and advanced growing techniques can save commercial growers significant volumes of water, with no impact on crop yields. Traditionally, about 25% of the water used to irrigate strawberry crops runs off through the grow bags and isn’t used. Their trial demonstrations show you can reduce that volume down to just 5% without any impact on the volume and quality of the strawberries you can grow.

Kent Success Stories

Profiting from the Water Resilience

Hawkenbury Flower Farm Case Study:
Reducing Water Consumption by 75%

The Challenge: Fragile Water Supplies and Manual Labour Drain

Hawkenbury Flower Farm, Staplehurst, was established by Sally Oakey in 2024 to provide locally grown flowers for the community. However, changing weather patterns – wetter winters and drier springs – exposed a major vulnerability. In one particularly dry year, Hawkenbury used their entire 6,000-litre supply of harvested rainwater by late April. This left the business entirely reliant on expensive mains water for much of the growing season.

The operational burden was equally unsustainable; hand-watering twenty-two flower beds took two hours every day, leaving Hawkenbury with a "serious problem" maintaining crops during summer. They needed a solution that reduced consumption while reclaiming time.

The Innovative Idea: Automated Precision "Leaky Pipe" Systems

With support from a Growing Green grant, Hawkenbury invested in the infrastructure needed to bring water to their flower plots by installing an automated "leaky pipe" irrigation system. This technology uses porous hoses that deliver water slowly and directly to plant roots. Sally describes the effect as being "like blotting paper," where the soil is allowed to absorb water slowly, without the waste of runoff or evaporation.

The innovation lies in its precision and control; the new system allows each individual bed to be turned off manually, ensuring that every drop of water is utilised with maximum efficiency while protecting the farm's soil and water health.

The Results: Reclaiming Time and Sustainable Business Growth

The results were immediate and significant, with the new system using 75% less water than manual watering. This efficiency translates to an estimated saving of 12,000 litres of water and roughly £400 in costs every year. Most importantly, it saves Sally around ten hours each week, which she now uses for higher-value activities like marketing and business planning.

This newfound capacity led Sally to launch a new area of her business, "Gentle Farewells Rooted in Nature," specialising in sustainable funeral flowers. One small investment in water resilience has provided the foundation for a more diversified and profitable future.

Proven Impact: Proof of Demand and Circular Market Entry

Growing Green	Outcome
Without Growing Green	*Annual ROI: 94%;* *Payback Period: Approximately 13 months.*
With Growing Green	*Annual ROI: 188%;* *Payback Period: Approximately 6.5 months.*

Note: These ROI figures are very conservative. They do not include the financial value of the increased flower yields Sally reported, nor the long-term benefit to soil health and plant survival during droughts. Including these would likely push the ROI even higher.

MJ Fruit Farm (Honeydale Farm) Case Study:
Meeting Retail Sustainability Standards

The Challenge: Climate Adaptation and Operational Efficiency

MJ Fruit Farm is a leading global producer and distributor that supplies fresh produce to major UK retailers like Aldi. To maintain these essential supply agreements, the business must meet rigorous LEAF Marque certification standards, which require proven evidence of environmental stewardship.

Relying entirely on the mains water grid was becoming an operational risk and a growing financial burden for the farm. Without improving their water-use efficiency and biodiversity, the business risked failing to comply with future contracts and losing its competitive edge in a changing climate.

The Innovative Idea: Water Infrastructure and Holistic Biodiversity

Using a Growing Green grant, MJ Fruit Farm implemented a coordinated set of improvements designed to build long-term resilience. They installed two 1,000-litre rainwater harvesting tanks to capture and store water on-site, directly reducing their dependence on the mains for daily operations.

This infrastructure was integrated with a broader biodiversity plan, including 150 metres of native, horse-friendly hedgerows and 12 bird boxes to encourage natural pest control. This holistic approach allowed the farm to achieve LEAF certification while simultaneously improving soil health and creating vital wildlife corridors.

The Results: Strategic Compliance and Immediate Savings

The project delivered immediate environmental and financial results, with the new tanks collecting 5,000 litres of rainwater during their first summer of use. This reduced mains water consumption by approximately 3,000 litres per month, saving the farm £45 in monthly bills and reducing its carbon footprint.

The success of the project has also enhanced local biodiversity, with 75% of the bird boxes already occupied by nesting birds. By securing LEAF Marque certification through these improvements, MJ Fruit Farm has protected its primary revenue streams and gained the confidence to set even more ambitious targets.

Proven Impact: Supply Chain Compliance and Resource Resilience

Growing Green	Outcome
Without Growing Green	*Annual ROI: 14%;* *Payback Period: Approximately 7 years.*
With Growing Green	*Annual ROI: 29%;* *Payback Period: Approximately 3.5 years.*

Note: While the direct financial payback is longer than some small-scale interventions, the strategic ROI is significantly higher. By achieving LEAF Marque certification, the business has secured its ability to maintain high-value retail contracts, which are essential for its long-term commercial survival.

Sunlight Development Trust Case Study:
Community Training for Water Resilience

The Challenge: Urban Water Scarcity and Mental Wellbeing Hubs

The Sunlight Development Trust operates the High Hopes Community Garden in a part of Gillingham where many residents live in Victorian terraced houses with very limited green space. This garden serves as a vital sanctuary for elderly residents and those with learning difficulties, providing an essential hub for mental and physical wellbeing.

However, the garden faced a critical lack of water access, which made it nearly impossible to grow crops during dry periods. Without a reliable irrigation source, many plants were dying off, leaving the community's hard work at the mercy of increasingly unpredictable weather.

The Innovative Idea: Water Harvesting and Hydroponic Training

To solve this, the 'Sustainable Skills for All' initiative was created to install a rainwater harvesting system that doubles as a teaching tool. The project focused on capturing rainwater in two 1,000-litre tanks, providing a sustainable alternative to mains water.

This was paired with the introduction of vertical hydroponic farming, which uses minimal water and space to produce food year-round. By demonstrating these techniques in the community garden, Sunlight Development Trust aimed to show residents how they could grow fresh vegetables at home, even in small courtyards or urban environments.

The Results: A Legacy of Self-Sufficiency and Social Inclusion

The project successfully delivered a new rainwater system and replaced damaged composting infrastructure through the efforts of 62 local service users. Members of the 'Men in Sheds' group led the construction, which not only improved the garden but also helped reduce social isolation and built community confidence.

While poor weather and staff changes meant the full hydroponic training is still in its early stages, the basic vertical farming units have been installed and demonstrated. The garden now has a permanent capacity to store 2,000 litres of water, significantly reducing its reliance on mains water.

Proven Impact: Boosting Social Value and Community Impact

Outcome
For charities like Sunlight Development Trust, the return on investment is found in social value rather than commercial revenue. By training underserved groups in sustainable gardening, the project has empowered beneficiaries with practical skills that promote long-term wellbeing. This initiative has turned a vulnerable garden into a resilient educational resource, fostering a sense of pride and collective purpose for the people of Gillingham.

Research and Support

for Kent Food Businesses

The case studies featured above were made possible by Growing Green, a collaborative sustainability training and grant programme. This initiative was driven by Growing Kent & Medway, a UKRI-funded innovation cluster supporting the region's horticultural and plant-based food sectors.

To deliver this programme, we partnered with Low Carbon Kent (Kent County Council). Established to help Kent businesses adapt to climate change and embrace the circular economy, their resources – including ISEP-accredited environmental training and their Sustainable Business Toolkit – can help turn your sustainability ambitions into reality.

Next Steps

Towards a Water Resilient Future

Securing your water supply is an essential part of sustainable risk management for any Kent-based producer. We hope the local success stories featured here have inspired you to move from a position of vulnerability to one of resilience by taking control of your on-site resources. By following the practical examples of the businesses in this guide, you can ensure that your operation remains viable and productive, regardless of the challenges posed by our changing climate.

Explore Further Sustainability Resources

While addressing water risk is a priority in the Southeast, a truly resilient business must examine all its core inputs. If the specific water-management strategies outlined in this guide are not currently applicable to your facility, or if you are ready to tackle your next sustainability challenge, our companion guides on Energy Efficiency and Waste Valorisation provide the same practical, cost-saving frameworks to help you protect your margins.

To support your next project, you can tap into the regional expertise and funding streams that make Kent and Medway leaders in sustainable food manufacturing.

Growing Kent & Medway

Visit our website for further crop-specific reports, technical expertise, and research facilities: or contact us directly to connect with our network for specific support.

Low Carbon Kent (Kent County Council)

Visit their website to access the Comprehensive Business Sustainability Toolkit and explore success stories from the LoCASE project.

Kent & Medway Growth Hub

Visit their website and social media channels to navigate the local funding landscape and identify grants for sustainability projects.

UK Research and Innovation

Growing Kent & Medway is funded by UKRI's Strength in Places Fund to invest in sustainable innovation within the horticulture and food sectors across Kent and Medway.

Concluding Remarks

Auditing your current use will help create an accurate picture of where you can invest in capturing, storing, and recycling water for the best return. Whether identifying quick fixes to stop leaks or investing in larger infrastructure and technology, such as precision irrigation systems, all efforts to improve your water-use efficiency are not only beneficial to the environment but increasingly important for your profitability and security of supply.

This guide was conceptualised, written, and designed by Dr Dominic Hill (Growing Kent & Medway), with practical waste strategy contributions from Richard Izzard (Low Carbon Kent).

Join the Growing Kent & Medway Ecosystem

Ready to secure your enterprise against climate risk? Our innovation cluster bridges the gap between ambitious local founders, sustainable grant funding, and world-class scientific expertise to make water-resilient food systems commercially viable.

Take Action Today:

- Explore Your Options: For highly targeted, crop-specific advice, download our dedicated In-Depth Waste Valorisation Report. To optimise your other core inputs, view our companion Energy Efficiency Guide and Waste Valorisation Guide.
- Connect with Us: Visit growingkentandmedway.co.uk to join our 700-strong member network, access local funding, and start your first water resilience project today.

> Thank you for working with us to build a more resilient, sustainable, and prosperous future for the Kent and Medway food system.

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