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Department for Levelling Up,
Housing & Communities

Guidance

Addressing water scarcity in Greater Cambridge: update on government measures

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Applies to England

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Introduction

This paper provides an update on measures announced at Autumn Statement 2023 to increase water supply in the region over the longer-term in the Greater Cambridge area, and on plans to address water scarcity issues in the short-term.

Cambridge is a unique place, with potential to leverage its existing science and tech industries to drive forward growth and investment, but this is constrained by a lack of employment and housing space in the city, which we are seeking to address as a priority. This is an important part of our wider levelling up ambitions and commitments to ending geographical inequality and eradicating pockets of deprivation that exist in all parts of the country, including Cambridge. By investing in the city, we can drive growth across the region and wider country, improving opportunities and living standards for all.

Last year we established the Cambridge Delivery Group, headed by Peter Freeman, Chair of Homes England, to develop and deliver an ambitious vision for the city. The Delivery Group is working with local leaders and communities to deliver these plans, focussing on creating sustainable and beautiful places for people to live, with green and community spaces and necessary public services that communities need. This will help to ensure that development across Cambridge is sustainable and enhances the surrounding environment.

As we set out in the Case for Cambridge published alongside this paper, the expansion of Cambridge represents a nationally significant growth opportunity. The city faces a unique set of challenges that stand in the way of that opportunity. The Environment Agency (EA) have advised that some water bodies in the Cambridge area are at risk of deterioration, and that any new development that takes place must not increase abstraction and risk deterioration to water bodies in Greater Cambridge. About 85% of the world's chalk streams are in the UK, and in Cambridge, Cherry Hinton Brook, Hobson's Brook, River Cam and River Granta are all chalk streams, which support a wide range of diverse wildlife. The chalk aquifer they emerge from, to the southeast of the city, is a main source of water for residents and businesses.

Recognising the unique context in Cambridge, the government has made a one-off commitment to work with local partners to address the deficit in water supply, until water companies bring major infrastructure online, through a new water credits system. This is underpinned by a major investment in measures to offset new demand for water in the area through retrofitting water efficient devices in existing buildings.

Water companies in England and Wales have submitted plans to Ofwat to propose investing £96 billion over the period of 2025 – 2030 in water and sewage infrastructure, a near doubling of current levels. For Cambridge, this is proposed to be realised through the Grafham pipeline transfer and Fens reservoir, which are proposed to come online in 2032 and 2036 respectively. Government is working closely with Anglian Water and Cambridge Water to ensure timely delivery of these projects.

A key focus of this approach is to not only meet the public water supply of Cambridge residents and businesses, but also the needs of the natural environment. While the intention of these measures is to allow development to proceed in the near-term, there is an opportunity for Cambridge to be a trailblazer in integrated water resources management to support water positive development.

Cambridge Water has a statutory responsibility under the Water Resource Management Planning process (as set out in the Water Industry Act 1991) to provide the long-term plan for meeting the water supply needs of their customers in the region and a protected and enhanced environment. Their [draft Water Resource Management Plan \(WRMP\) 2024](https://www.cambridge-water.co.uk/media/4123/ssc35-cambridge-water-revised-draft-wrmp24.pdf) (<https://www.cambridge-water.co.uk/media/4123/ssc35-cambridge-water-revised-draft-wrmp24.pdf>) (PDF, 5.4MB) includes a series of proposals to manage existing water demand, alongside the proposed delivery of two Strategic Resource Options, through the Grafham transfer in 2032 and Fens Reservoir in 2036. This will ensure that chalk aquifer abstraction levels can be reduced and protect the long-term sustainability of chalk streams and the wider ecosystems they support. We expect Cambridge Water to roll out an ambitious programme of smart meter installation for both households and non-households. We will work to ensure the updated WRMP is environmentally sound, and that it is delivered in full and on schedule.

As a member of the Water Scarcity Group, the government has worked in partnership with Cambridge Water to develop these measures and will continue to do so to ensure we can go even further. We are working closely with Cambridge Water, who have an obligation to prevent the deterioration of water bodies and to provide a safe and sustainable water supply to the area, to make sure they deliver a WRMP that meets the government's ambition for the area. This includes ensuring they work with Anglian Water to deliver Strategic Resource Options on time, they meet targets to install smart meters to measure water usage more accurately and they support, including through appropriate funding, developers in designing new development to tighter water efficiency standards and to consider water reuse.

In order for growth to proceed in a sustainable way, we have developed a 2-part plan:

1. Ensure long-term water supply so that the city can grow in a sustainable way. We are doing this by:

- Assuring the delivery of long-term major water supply infrastructure including the proposed Grafham transfer and Fens Reservoir.
- Supporting the development of a plan for strategic water resources over the long-term.
- Using Cambridge as an area for innovation in water management in agriculture and through nature-based solutions.

2. Support growth in the short-term so that development currently stalled can proceed. We are doing this by supporting increased water efficiency, reuse and offsetting, which will prime a 'water credits system'.

This paper is jointly published by the Ministry of Housing, Communities and Local Government (MHCLG) and the Department for Environment, Food and Rural Affairs (DEFRA). Alongside this paper we have published a joint statement with the EA and the local planning authorities covered by the Greater Cambridge Shared Planning Service – Cambridge City Council and South Cambridgeshire Council.

Chapter 1: Long-term water supply

Introduction

In a changing climate we must plan ahead to build resilience to more intense dry or wet weather events. Ensuring clean and plentiful water is vital for public water supply, and increased water demands from all sectors, fuelled by droughts and climate change, threaten the ability of realising Cambridge's potential. To this end, Cambridge Water and Anglian Water are proposing bringing forward two Strategic Resource Options - a pipeline transfer from Grafham reservoir (in Cambridgeshire) into Cambridge Water's supply zone will deliver 26 Megalitres per day (ML/d) until 2036 when the new Fens Reservoir will deliver 43.5 ML/d.

We are investing over £1 million in nature-based solutions (NBS), which can effectively enhance the long-term flow of water bodies, improve resilience to floods and improve biodiversity. It will ensure water that would otherwise flow out to sea is captured for public use. A further £1.45 million in agriculture will position Cambridge as a trailblazer area for the government's national approach to water management in the agricultural industry. This will be realised through Agricultural Water Resource Management Plans (AWRMPs) and facilitating local abstraction groups to identify and quantify where the next sustainable innovative solutions to water scarcity are located.

Supporting increase of water supply through major infrastructure: Fens Reservoir and Grafham transfer proposals

Fens Reservoir has been proposed as the main strategic supply option to secure water supply to customers of Anglian Water and Cambridge Water for future generations. It will mean that less water is taken from sensitive sources, such as Cambridge's chalk aquifer, helping protect and restore the environment. The project is in its early stages and is expected to be in supply between 2035-37. The reservoir will capture water during the winter season and store water so it is on tap when residents in Cambridge and the wider area need it, meeting the challenges of a changing climate and a growing population.

Currently, 99% of Cambridge Water's supply comes from aquifers and other groundwater sources, which can put pressure on the environment, in particular at sensitive sites and when flows are low. The delivery of Fens Reservoir would precede cuts to abstraction licence caps by the EA, which will mean that less water is removed from the aquifer. It will build resilience in the water supply and further protect and enhance biodiversity and minimise risks from drought and flooding.

Fens Reservoir would be taken forward as a Development Consent Order (DCO) through the Nationally Significant Infrastructure Project (NSIP) consenting process. This means an application would be considered against the [National Policy Statement for water resources infrastructure](https://www.gov.uk/government/publications/national-policy-statement-for-water-resources-infrastructure) (<https://www.gov.uk/government/publications/national-policy-statement-for-water-resources-infrastructure>), examined by the Planning Inspectorate and determined by the Defra Secretary of State. The reservoir is hugely significant for the long-term supply of water to the Cambridge area and for delivering our vision for Cambridge. In 2019, we

commissioned the [National Infrastructure Strategy](https://www.gov.uk/government/publications/national-infrastructure-strategy) (<https://www.gov.uk/government/publications/national-infrastructure-strategy>) to accelerate NSIPs, as part of a desire to make the decision process for DCOs faster, smarter and greener. We are streamlining and updating the NSIP process, which will be in place by Spring this year. We will work with the applicants (Anglian Water and Cambridge Water) to support a timely consent to the proposed Fens Reservoir.

Grafham transfer is a proposed transfer of 26Ml/d of water from Grafham Water into the Cambridge Water supply zone as an interim solution before Fens Reservoir is forecasted to come online, as identified in Cambridge Water's draft WRMP24 and [Water Resources East's Regional Water Resources Plan](https://wre.org.uk/wp-content/uploads/2023/12/WRE-Regional-Water-Resources-Plan-for-Eastern-England.pdf) (<https://wre.org.uk/wp-content/uploads/2023/12/WRE-Regional-Water-Resources-Plan-for-Eastern-England.pdf>) (PDF, 30.9MB). It will be conducted in parallel with the Grafham to Rede strategic main pipeline by Anglian Water to Affinity Water. The availability of this water is time limited to 2040 when Anglian Water no longer have capacity to support the transfer and they need the full scope of the existing transfer, ensuring cost efficiency through economies of scale.

The Grafham transfer will only be available when the Grand Union Canal resource option is in place which allows Affinity Water to reduce its water transfer from Grafham Water. The Grand Union canal option is progressing through the Regulators' Alliance for Progressing Infrastructure Development (RAPID). The current expectation is that water will be available for Cambridge Water in 2032 and they will undertake all of the work required to enable the transfer between 2025 and 2030 to ensure they are ready for this water as soon as it becomes available. This water will be available until 2040 and therefore will continue to provide a supply of water to Cambridge Water until Fens Reservoir is available.

Nature-based solutions (NBS)

Nature-based solutions create or restore habitats to use natural processes in place of hard engineering approaches while simultaneously providing human well-being and biodiversity benefits. Examples of nature-based solutions could be the creation of wetlands, woodlands and storage reservoirs to capture and slow the flow of flood waters within the environment to reduce or prevent flooding to homes and businesses, and to then

use this water to provide additional water supply. This additional storage of water can also increase biodiversity and wildlife connectivity.

Groundwater modelling of NBS in the Cam catchment suggests NBS could have a significant benefit for sustaining groundwater and river flow levels, with results showing that they could offset up to 8.1ML/d of additional abstraction as part of a water neutrality approach for the catchment. This would maintain access to water for longer during dry periods and would help prevent deterioration of water bodies. We are funding Water Resources East to trial nature-based solutions in the Cam catchment to see if this theoretical modelling works in practice. Their work in the [Norfolk Water Strategy Programme \(https://wre.org.uk/projects/norfolk-water-strategy-programme/\)](https://wre.org.uk/projects/norfolk-water-strategy-programme/) is a flagship, collaborative approach to secure good quality, long-term water resources for all water users, while protecting the environment. Utilising aspects of this work in Cambridge has additional benefits to public water supply, including supporting biodiversity recovery, mitigating soil and carbon losses, reducing the chance of downstream flooding and reducing nutrient loads in waterbodies.

The unit price per ML/d compares favourably to leakage reduction and domestic water efficiency options presented in Cambridge Water's draft WRMP24. There is no immediately comparable metric of impact between NBS and other water neutrality interventions, but estimated impact suggests a unit cost of £1.9 million to £2.5 million per ML/d of long-term average baseflow. This compares to £3.98 million for Cambridge Water's draft WRMP leakage options and £3.75 million for domestic water efficiency options.

If demonstrated, then NBS could provide an additional water saving mechanism which, over the long-term, can be sustainably funded through the water credits system. This would allow landowners to restore their land and receive investment for doing so and private investors can offset additional water use in new developments. We will be reviewing the outcomes of the NBS trials in the Cam catchment to understand how they can be incorporated into the design of the water credit market.

Agriculture

64% of the land around wider Cambridge has been identified as Grade 1 and 2 agricultural land, making a significant contribution to the nation's food production. This leads to high abstraction demand for irrigation in the

summer months, including some catchments where peak agricultural abstraction can exceed that of the Public Water Supply. Cambridge is therefore acting as a trailblazer for two projects to which the [Prime Minister committed at the 2023 Farm to Fork summit](https://www.gov.uk/government/speeches/pm-opening-remarks-at-uk-farm-to-fork-summit-16-may-2023#:~:text=As%20a%20nation%2C%20our%20way,food%20and%20farming%20industry%20too.) (<https://www.gov.uk/government/speeches/pm-opening-remarks-at-uk-farm-to-fork-summit-16-may-2023#:~:text=As%20a%20nation%2C%20our%20way,food%20and%20farming%20industry%20too.>): supply-demand balance assessments for AWRMPs and Local Resource Options (LRO) screening studies.

- Supply-demand balance assessments for AWRMPs will give us a thorough understanding of what the sector's future needs are going to be across a water catchment. They will assess current and future agricultural water demands in comparison with licence constrained supplies and in the context of water resources availability for all sectors. This will help farmers understand and plan their water resource management more effectively and increase resilience to climate change. Work has begun on these projects, using the River Cam as the first catchment to undergo a supply-demand balance assessment. As the first area of the country to trial the supply-demand balance assessments for AWRMPs, this project is also being used to establish a baseline methodology which can be rolled out across the country.
- LRO screening studies are targeted projects to support farmer-led groups to identify local water resource schemes, such as multi-farm reservoirs or aquifer recharge schemes, which will ensure the resilience of the water supply for agriculture in a local area. They will encourage innovation in the sector and help build understanding of the local picture of water scarcity, helping to identify what the targeted local solution could be. They are likely to identify future possible infrastructure needs which the Water Abstractor Groups may want to progress to future capital funding bids. Work on the first LRO screening study has begun, working with a group of farmers around the River Thet (which contributes to the Cambridge water supply), with an engagement plan established. As with the supply-demand balance assessments for AWRMP, this is also being used as the trial for the national roll-out. As well as the analysis of local options, it will contribute to producing a methodology which can be replicated in other areas.

We expect these agricultural interventions to support [Defra's Plan for Water commitment](https://www.gov.uk/government/publications/plan-for-water-our-integrated-plan-for-delivering-clean-and-plentiful-water/plan-for-water-our-integrated-plan-for-delivering-clean-and-plentiful-water) (<https://www.gov.uk/government/publications/plan-for-water-our-integrated-plan-for-delivering-clean-and-plentiful-water/plan-for-water-our-integrated-plan-for-delivering-clean-and-plentiful-water>) to support farmers to build their resilience to drought by increasing their on-farm storage and developing more efficient methods of using water on their land. This includes our target to increase on-farm water storage by 66% by 2050.

Long-term water resources plan

Grafham transfer and the Fens Reservoir are proposals with the aim of supporting growth under the existing [Local Plan \(https://www.cambridge.gov.uk/media/6890/local-plan-2018.pdf\)](https://www.cambridge.gov.uk/media/6890/local-plan-2018.pdf). However, our ambition to drive forward growth and investment to the city will require additional water supply to that currently planned. We are commissioning regional-scale models to support a long-term water resources plan that meets our development growth ambitions. This will include working with water companies across the region to identify new transfers and supply-side options beyond those already in Water Resources East's core regional plan. This will identify low regret, 'best value' combinations of existing, accelerated and additional options that perform well given future uncertainties.

Water Scarcity Group

We have established the Water Scarcity Group to provide advice on our approach, to help ensure that sustainability is at the core of development in Cambridge. This group is made up of key actors across government and the industry to provide strategic advice to:

1. Ensure alignment across all key partners in the work, including government, water companies, developers and others across the industry.
2. Advise on the successful delivery of the water credits system and the associated water saving measures (retrofitting, agricultural solutions and nature-based solutions).
3. Engage with key stakeholders and interested parties across Cambridge to ensure that local concerns are properly represented.

4. Provide additional assurance to the proposed delivery of the pipeline transfer from Grafham Water and Fens Reservoir to ensure the timely consent of the two projects.
5. Work alongside water companies to plan additional major water infrastructure to supply the necessary additional water to the area to meet our development ambitions.
6. We will appoint Dr Paul Leinster as Chair to lead the Water Scarcity Group. His experience as Chief Executive of the Environment Agency 2008 - 2015 and his current role as Independent Chair of Water Resources East ensure he is in prime position to bring together the major stakeholders in the region to advise and support the delivery of sustainable development over the long-term.

Chapter 2: Offsetting water demand

Introduction

The [Environmental Improvement Plan 2023](https://www.gov.uk/government/publications/environmental-improvement-plan) (<https://www.gov.uk/government/publications/environmental-improvement-plan>) outlines government's intention for water positive development and sets out a statutory target to reduce the use of public water supply by 20% per person nationally by 2038. We are developing Cambridge as an exemplar area for sustainable development and integrated water resources management. Our ambition is for beautifully designed and well-integrated neighbourhoods for people to live, work and study; with a commitment to make sure the development being brought forward is an exemplar of environmental sustainability.

Currently, there are over 9,000 homes and 300,000m² of commercial space unable to proceed through the planning system due to the EA advising that some water bodies in the Cambridge area are at risk of deterioration and that any new development that takes place must not to add to this adverse effect.

To that end, we are creating an innovative 'water credits system' primed by up to £4.5 million to retrofit water efficient devices into existing buildings and offset projected demand of development coming forward.

Water positive development

DEFRA set out in its [Environment Improvement Plan \(2023\)](https://www.gov.uk/government/publications/environmental-improvement-plan) (<https://www.gov.uk/government/publications/environmental-improvement-plan>) and Plan for Water (2023) a roadmap to water efficiency in new developments and retrofits, to be delivered over the next decade. We are bringing forward a series of those commitments with our ambition for Cambridge to be an exemplar area for water positive development.

Water neutral development is achieved where the new demand for water is offset in the existing community by making existing homes and buildings in the area more water efficient. Water positive development goes even further. Being water positive means ensuring that we give back more to our water sources than we take, conserving and protecting water while also replenishing it. This involves actions like recycling water, collecting rainwater, and supporting projects that improve water access for communities. By being water positive, we aim to have a positive impact on our environment and ensure sustainable water resources for future generations.

The Plan for Water committed to developing guidance on water positive development and we will pilot this approach in Cambridge by:

- 1) reducing water use in new buildings;
- 2) reusing more water; and
- 3) offsetting water use.

Through this approach we will also support wider integrated water management in new developments to address surface water and sewer overflows as well as improving water quality from diffuse pollution and combined sewer overflows. An example is in Eddington, where the sustainable drainage network captures surface water for use

in the non-potable network. Using rainwater can reduce the need for drinking water from 144 to 80 litres per person per day.

Water credits system

We will pilot a 'water credits' system where developers can offset their development through the purchase and sale of water credits to ensure they have a neutral impact on water scarcity within Cambridge. This will provide the mechanism for development to progress through planning while minimising the risk to the environment. We are undertaking detailed design work but can set out now our starting point in doing that work.

We will establish a market framework and a market operator who will oversee where 'water credits' can be allocated to developers to ensure that the impact of water demand from new development is neutralised. This will be in place as long as it is necessary. Initial government investment will be used to retrofit both household and non-household properties in Cambridge to provide the initial credits, with any property owners meeting the market requirements for retrofits able to supply the market in future. We are also undertaking a pilot to understand the scope for nature-based solutions and other water saving measures to provide assured water savings through the market. Ahead of introducing the system, we will work with the local planning authority, developers, EA and other key stakeholders to consider how the scheme will interact with the planning process. We are confident this overall package will be sufficient to address the EA's concerns.

Once the system is up and running the market operator will match up buyers and sellers of water credits. Developers will be expected to increase levels of water efficiency and reuse (where possible), with the remaining water that cannot be reduced, offset through the purchase of credits. Water savings provided through retrofits will be monitored and assured, using water company metering data and assured through the EA and the market operator. This will allow the EA's objections on the grounds of water supply issues to be lifted to development identified as water neutral through the system. We are currently working on the requirements for the market and the operator and establishing the most cost-effective routes to retrofit with the support of local stakeholders, and the Water Scarcity Group will play a role in reviewing options. We are undertaking detailed design work on the system, ahead of launching it later this year. We expect to provide further updates in due course, including on the appointment of a market operator.

We will work to ensure that the cost of the system balances the impact on viability with effectiveness of the system overall and will engage with developers to support that process. Defra encourage water companies to provide developer incentives for meeting a standard of 110 litres per person per day (l/p/d) or lower, which could relieve some of the burden. Examples of this include the discount or zero charge provided by United Utilities, Severn Trent and Northumbrian Water. The United Utilities discount has saved developers more than £25 million and created a potential saving of 3.8 million litres of water per day. Thames Water also provide a £200 per home developer incentive for using the fittings-based approach. We will work with Cambridge Water and Anglian Water to ensure they provide this and to quantify their level of support.

Retrofitting to offset projected water demand for new development

The average water use per person per day is 142 litres in England and Wales. We have set a new legally binding target under the [Environment Act 2021](https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted) (<https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>) to reduce the use of public water supply in England per head of population by 20% by 2038. This is part of the trajectory to achieving 110 litres per person per day household water use, a 50% reduction in leakage and a 15% reduction in non-household water use by 2050. Increasing water efficiency of existing buildings is essential to minimise the amount of additional water resource being taken out of our rivers and aquifers, especially as water demand rises in line with development. As demand for water increases, building new infrastructure to meet growing demand becomes increasingly expensive. If we manage water more effectively through more efficient devices, we can offset the need for new infrastructure and reduce pressure on existing ones. Additionally, efficient water use makes our supply more resilient against impacts from climate change, such as droughts, and provides cost savings to customers.

We are investing up to £4.5 million to deliver retrofitting of water efficient devices such as efficient sensor taps and boundary flow regulators in homes, schools, leisure centres and other commercial buildings in Greater Cambridge. Installation of water saving measures in homes can save on average 32.5 litres per household per day whilst businesses such as schools can save up to 3,100 litres per day.

Over the next 12 months, government funding will be used to deliver retrofits across Greater Cambridge, targeting initial retrofits at commercial premises, and social housing stock, including local authority owned stock

and housing association homes. We will be working with specialist retrofit companies, to offer water audits and retrofits to households and businesses across Greater Cambridge, helping them to save water and money on their utility bills. We envisage that credits purchased through the water credits system will provide further funding for retrofitting after the initial government investment period, ensuring retrofitting will continue to be provided after 2025, once government investment is completed.

Data from Market Operator Services Limited (MOSL), the market operator for the water sector, shows that education and retail sectors are the highest water users in Cambridge. There are 221 schools in Cambridge and 20% of Cambridge residents are in education. [Waterwise research \(https://database.waterwise.org.uk/knowledge-base/evidence-for-large-scale-water-efficiency-phase-ii-final-report-2011/\)](https://database.waterwise.org.uk/knowledge-base/evidence-for-large-scale-water-efficiency-phase-ii-final-report-2011/) shows school retrofits offer savings of 1,340 litres/pupil/year when coupled with awareness, meaning around 3,130 litres can be saved per school each day. This is the equivalent water saving of that used by over 2,000 new homes. Water companies have achieved positive feedback for water efficiency retrofits. Water efficient devices that may be included in the retrofitting rollout include water efficient showerheads, tap aerators and boundary flow restrictors.

Achieving water neutrality or water positive development excludes the potential contribution of new resources, such as reservoirs or additional abstraction. Strategic resource options which will provide major additional water supply are proposed to come online in 2032 through the Grafham transfer and in 2036 through Fens Reservoir. Therefore, we will keep the need for water offsetting measures under review until strategic resource options are implemented.

Tighter water efficiency standards in new homes

We are also focusing on reducing water demand in new homes, in order to reduce the pressure on water supply further.

In December 2023, through a [Written Ministerial Statement \(https://questions-statements.parliament.uk/written-statements/detail/2023-12-19/hcws161\)](https://questions-statements.parliament.uk/written-statements/detail/2023-12-19/hcws161), we announced that in areas of serious water stress, where water scarcity is inhibiting the adoption of Local Plans or the granting of planning permission for homes, local planning authorities are encouraged to work with the Environment Agency and delivery partners to agree standards tighter than the

110 litres per day that is set out in current guidance. Doing so will help to save the water needed to allow places such as Cambridge to continue to grow and reach their potential.

We are also reviewing the relevant building regulations in Spring 2024 to allow for tighter water efficiency standards to be set and considering the competence and skills to enable this transition as outlined in Action 7 of the Plan for Water Roadmap. We are also encouraging the use of a fittings-based approach linked to the water efficiency label.

Water reuse in new development

We can also use the water supply we have more efficiently. Water reuse is utilised around the world and has been demonstrated on a small scale in individual developments around the UK. Defra are consulting on legislative changes to enable water reuse systems to be managed by public water suppliers and we are working to encourage and incentivise developers in Cambridge to design to the highest water efficiency standards possible, utilising innovative technology such as greywater reuse systems.

Dual pipe systems currently run by private water suppliers occur in London (e.g. Southbank, Kings Cross, Elephant Park), Clay Farm in Cambridge and internationally (e.g., Australia, Germany California). In the UK, these are designed to meet British Standards and quality control issues with development scale systems reported to local authorities. Under current legislation, dual pipe systems can only be operated by private water suppliers as they fall under the [Private Water Supplies Regulations 2016](https://www.legislation.gov.uk/uksi/2016/618/contents/made) (<https://www.legislation.gov.uk/uksi/2016/618/contents/made>). However, there are benefits from a sector and societal perspective for water companies to run such schemes.

We are delivering Action 9 in the roadmap to water efficiency – investigating dual pipe systems and water reuse options for new housing development as part of the [review of the planning framework](https://www.gov.uk/government/publications/environmental-improvement-plan) (<https://www.gov.uk/government/publications/environmental-improvement-plan>). This aims to amend legislation this year and will be used to encourage communal-scale rainwater harvesting and water re-use systems to reduce the demand for potable water direct from the public water supply. This will enable innovative schemes such as Eddington to be replicated, where the rainwater that would otherwise be wasted can be used to flush toilets,

wash clothes and water gardens. The use of raingardens and ponds for water storage can mitigate downstream flooding and reduce pressure on the combined sewer system, potentially reducing the use of storm overflows. Water reuse systems typically lower drinking water consumption from 144 down to 80 litres per person per day.

We encourage and will work with emerging development proposals in Cambridge to design to the highest water efficiency standards, utilising dual-pipe systems and other innovative technology to improve sustainability. Innovative developments such as Clay Farm in Cambridge show us what is possible if we work together to build homes for the future that save more water. We are currently reviewing the evidence base for water reuse systems with a view to consulting on changes to the water supply regulations to enable greywater reuse and rainwater harvesting to be managed by water companies in new buildings.

Other measures that will have benefits for Cambridge

A leaky toilet can waste up to 400 litres of water per day. The government has committed to reviewing the Fixtures and Fittings regulations and will be meeting with stakeholders from across the industry over the course of this year as part of a taskforce to identify solutions to reduce toilet water wastage. We are reviewing the design of dual flush buttons and releasing a mandatory water efficiency label across water-using products to make it easier for consumers in both household and non-household settings to make water efficient choices.

We are working closely with the industry including regulators, water companies, retailers, the Consumer Council for Water and Waterwise to identify opportunities to raise awareness around the value of water.

Government previously asked water companies to increase their smart metering, and since then we have worked with the Department for Energy Security and Net Zero and industry to learn lessons from the energy market. Defra and its regulators continue to engage with water companies regularly to ensure smart metering is delivered at pace. We will work closely with the market in Cambridge to ensure the insights from smart metering rollouts are incorporated into the water credits scheme.

Reducing demand in non-households

In its consultation on the Future Homes and Building Standards the government reiterated its commitment to review water efficiency options for non-household including looking at planning policy and the role of voluntary schemes. Defra is also working closely with Ofwat on its consultation around environmental incentives for developers to consider how water companies can further incentivise water efficiency at the point of new developments being delivered.

The government is working closely with regulators and the highest water-using sectors to identify opportunities for non-household consumers to move their usage off mains drinking water supply and utilise the opportunities offered by recycled water. We are also working closely with MOSL and the retail market to consider innovative approaches to tariffs and how government can support the rollout of smart metering to improve data on water usage across the sector and make water efficient practices easier for non-household consumers.

