

[Wholesome water that is - in case you wondered!] Water is the subject, not just the substance, on everyone's lips in Cambridgeshire... And why? Because the county is officially the driest region in the U.K. ?notwithstanding Anglia Water's access to the colossal Grafham Water reservoir constructed in 1965.

This artificial 'lake' is still the eighth largest water company asset in England by volume with a circumference of 16 kilometres and an astounding depth of 21 metres at its maximum. And now, an additional reservoir (in the Fens) could start on site between 2025 and 2030 and begin to supply enough water to quench the thirst of the growing population by the mid to late 2030s. The preferred location selected by Anglian Water and Cambridge Water, is at a site just North of Chatteris in Cambs. It's vast size would be roughly equivalent to Grafham Water, with a surface area of some five square kilometres and planned capacity of up to 55 million cubic metres of water.

Introduction and background

East Anglia is the driest region in the U.K., which makes the area particularly vulnerable to climate change impacts and leads to greater stress on water resources when incidents of extreme weather arise. In addition, this is one of the fastest growing regions in the country and an estimated 170,000+ new homes could be built out over the next five years. In fact, by 2050 the region's population may swell by a further million people. And whilst the acute water shortage in Cambridgeshire and the Fenlands are a cause for great concern, necessitating urgent action and intervention, this is not the only area where the regulator, water company customers, businesses, M.P.s, local authorities and the National Infrastructure Commission are concerned about.

On the 30th March this year, the Water Regulator for England and Wales, OFWAT gave the green light to continue investigation into three new reservoirs, [which could supply water for over three million customers,] together with nine other infrastructure projects, all being elevated to the next stage of development. As well as the planned new reservoirs in Oxfordshire and Lincolnshire and Cambridgeshire, the package of proposed solutions from seven different water companies, also includes recycling water, and schemes to transfer water from areas of surplus water to others with less. The 12 initiatives will receive ring-fenced funding to continue investigating complex technical issues and local environmental impacts. This programme of investment will be overseen by the Regulators Alliance for Progressing Infrastructure Development (RAPID) whose director, Paul Hickey says; "The water sector needs to act now to secure future needs of customers and the environment. Finding new, sustainable and resilient ways to maintain water supply across the country is vital, and all the more pressing given climate change, the increase in population and economic development."

The water shortage problem more generally.

No new reservoirs have been built in the U.K. since the water industry was privatised in 1989 and in some cases water companies have sold off existing reservoirs, thereby

compounding the situation still further. These included assets owned by Thames Water, Severn Trent and Southern Water. The heat of last summer, (2022) notorious for its record-breaking temperatures and drought conditions, prompted the influential civil engineer and Chair of the National Infrastructure Commission, Sir John Armit CBE to remark: "It's been three decades since the last major supply reservoir was built in England and the situation we are facing this summer indicates what we can expect to happen with increasing regularity in the future. If we want avoid severe shortages in future, we can't afford to take our foot off the pedal once the rain comes and this summer becomes a memory."

Of course, the volume of leakage of valuable water from the aging, sub-surface infrastructure network is a critical issue too and as such, has received considerable coverage in the press and media comparing each company's performance against the ambitious reduction targets set by the regulator. Anglian Water has responded saying in a public statement that: "We have been working hard to reduce leakage in our network - it's the lowest in the industry per kilometre of pipe and we've exceeded our targets on leakage for more than 10 years in a row." Adding; "But we're always looking to push it even further, and we are committed to making a 16.4 per cent reduction in leakage before 2025."

The long-term regional solution

On the prospect of a new reservoir, Fenland District Council issued a statement saying: "This large-scale investment will help to secure water supply to Fenland residents for future generations while protecting the environment from the effects of a changing climate. Their (AW & CW's) proposed location for a new reservoir in Fenland was confirmed on the 12.10. 2022 and is set to be situated north of Chatteris, near Doddington and Wimblington." Water would be abstracted from the River Great Ouse, river levels permitting and supplemented by piped transfer for treating. The capital costs would fall on water company customers through their bills, with a third-party provider likely to construct and operate the reservoir.

Construction of the huge Fens Reservoir will involve excavating soil and underlying material from the site, which will then be used to create the surrounding embankment that will contain the water in the reservoir. In addition to the embankment, the primary infrastructure required includes a water treatment plant, water pumping equipment and pipelines, inlet/ outlet facilities and equipment for operating and maintaining the reservoir, which will be capable of supplying up to 87 million litres of water every day!

The accompanying image to this article

This contemporary photograph shows the Lee Valley Park, *Walthamstow Wetlands'* Coppermill building, which was acquired by the East London Waterworks Company in 1859 and converted into a pumping station. The iconic Italianate tower with its open arcade was

added a few years later and now enjoys Grade II listed protection. This housed the steam engine for pumping water from Coppermill Stream into the surrounding newly dug reservoirs. [Regular readers of this column may know that the location also gives its name to a nearby, strategically important intersection on the West Anglia mainline railway, known as *Coppermill Junction*.]

Find out more

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Topics