

Industrial Heritage Group Visit to Bewl Water SE Water Treatment Plant

The Industrial Heritage group visited the SE Water Treatment Plant at Bewl Water to see how our water is cleansed and processed before passing into the main water distribution system for consumers. A number of us met up for lunch in the Boat House Bistro for lunch and enjoyed the outstanding view of the reservoir on a warm sunny autumnal day.

Bewl water is currently owned by Southern Water and has a capacity of 31,300 million litres of water and is the largest body of inland water in South East England. SE Water extracts water from Bewl Water and a number of local bore holes for treatment and supply to customers.

The process of cleaning our water is a complex process where a series of chemical interventions are undertaken to remove debris, dissolved, hydrogen sulphide gas and suspended silt. The first step is aeration of the water to introduce oxygen and the addition of the chemical Ferric Oxide to promote coagulation and flocculation of the unwanted material suspended in the water, a small dose of Chlorine is also added at this point. The flocculant floats to the surface of the treatment tanks and forms a sludge which is scraped off, and being rich in nutrients, is sent to farmers as fertilizer. This step is followed by Ozonisation and filtering to remove any particles that remain in the water. A further step is to pass the water through and activated carbon filters to remove products from the ozonisation process. The final step is to chlorinate the water to kill off any bacterial matter. It is at this point that the water is clean, clear and ready for distribution to two closed storage reservoirs and onward distribution to consumers in the Weald of Kent.

The output from the plant is impressive. It can treat and supply on average 565 million litres of water per day through 14,000 Km of mains pipe line (we were told the equivalent of pipes running around the M25 74 times!) What's more the plant operates 24hrs per day, 365 days per year virtually unmanned. Whilst technical staff are able to monitor the plant it is controlled from a central HQ at Snodland.

The reservoir capacity is able to meet current demand, but a forward plan is to build additional reservoir capacity near Canterbury to meet the anticipated growth in consumer demand over the next 25 years.





Sevenoaks U3A members at the Bewl Water Treatment Plant.