



Baroque-style architecture designed by William Booth Bryan

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King George V Reservoir

Innovative pumping station



King George V opened this Grade II listed pumping station in the London Borough of Enfield in 1913. It is known throughout the world as the home of the first 'Humphrey' gas pumps, three of which can still be seen.

The Pump House is nine bays long and three bays wide with corner turrets, stone cornices and latticed windows. The inside walls are in white glazed brick with green dados and cornices, also in brick. A large cast-iron gantry moves along the top of the cornices.

Originally, there were five gas pumps, each housed in deep brick-lined pits. These cast-iron pumps were invented by British engineer H.A. Humphrey and built by Siemens Brothers. They used internal combustion to raise 40 million gallons of water from the Lea Navigation to the King George V Reservoir every day.

Each pit has four water admission valves arranged in a ring casting around the base of the combustion chambers.

Gas was supplied to the pumps from bags inside pairs of circular cast-iron casings.

The water was 'compressed' into a cast-iron pipe through the Water Tower House, using inlet pipes and a weir to reach the reservoir.

The pumps didn't use the traditional pistons and flywheels. Instead, the process relied on the free movement of water between the pump and the tower.

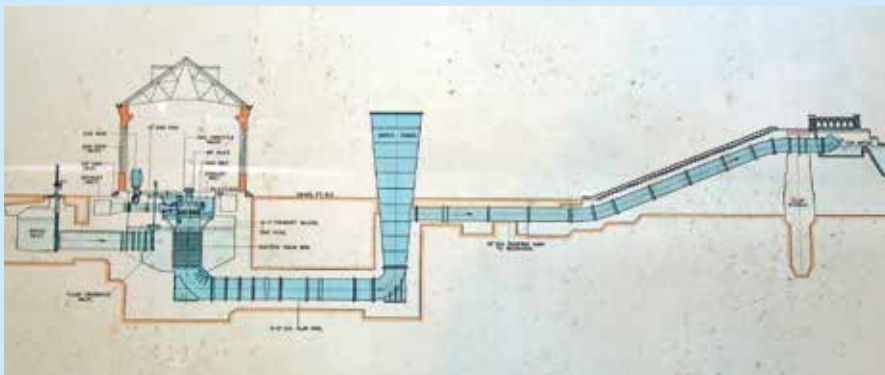
These Humphrey gas pumps were used right up until the late 1960s, when they were replaced by electric pumps.

The Retort House is two bays long and four bays wide. It stored gas which was made from anthracite in Dowson producers before being passed through a scrubber into the gas bags of the Pump House.

The Water Tower House is an ornate building. It contains four cast-iron water towers with steel-plate tops.

The Weir Inlet - The Italianate granite balustrade is placed above four cast-iron outlet pipes with upturned ends. The pipes emptied water into a brick chamber with a granite sill, over which the water then cascaded into the reservoir.

The Baroque-style buildings in the complex were designed by William Booth Bryan for the Metropolitan Water Board. He used English bond red brick with limestone dressings, set on a blue brick plinth. All buildings have been Grade II listed since 1989.



Arrangement of the Humphrey gas pump

