

WaterWords

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Ledbury's historic water supply Weekend of commemoration



The Waterworks Museum prides itself on telling important stories not just about Hereford, but also of the county's market towns. A fine example of this can be seen in the award-winning Massington Lineshaft exhibit that has recreated the Edwardian water pumping system which was installed in 1899 and served Ledbury until the pumping station was electrified in the 1950's.

The water supply for Ledbury came from two borehole sources. The main one was situated at Massington, to the east of Ledbury on the edge of the Eastnor Estate. This small picturesque pumping station, which originally contained a single cylinder diesel engine, linked via an overhead Lineshaft to a large three throw plunger pump. It was only taken out of use when the works was

Creation of a new exhibit

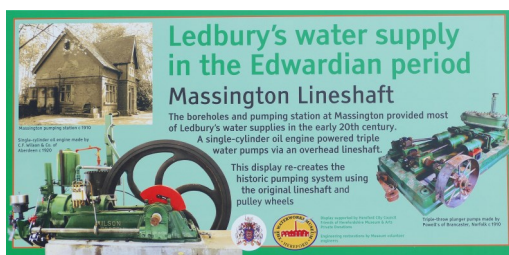


Researching for a Museum publication, Emeritus Chairman Noel Meeke visited Massington and was invited inside by the then owners, Roger and Pauline Pugh. Over a cup of tea in the room which had been the pumping hall, they explained where all the machinery had been in situ. Afterwards, he led a walk in the grounds pointing out the covered-over boreholes, during which Noel

spotted a Lineshaft lying under shrubs. Roger immediately offered it to the Museum and engineering volunteers transported the shaft to the Museum a week or so later. This was in 2012.

Within a year or so, the Museum received two other donations. A large 1920's single-cylinder diesel engine, similar in style to the engine that had provided power at Massington, courtesy of Grampian Transport Museum. Manufactured in Aberdeen by C F Wilson & Co, this engine is extremely rare and thought to be the only working example in Britain. To complete the new display we have used a triple-throw plunger pump, also donated in 2012, by the Norfolk Museums Service. Together, these donations have re-created the Edwardian water pumping system at Ledbury in a permanent display.

Creating this display was a complex project requiring many different skills with many problems to be overcome, meaning that volunteer engineers took nearly five years to complete it. Therefore it was very gratifying when their effort was recognised and the project won the West Midlands Museum Development Volunteers Award (Project) 2018.



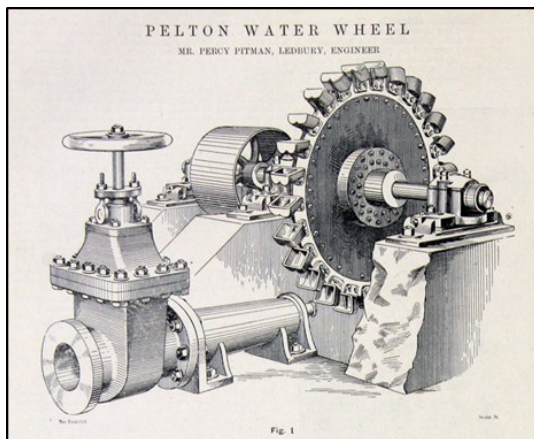
What is a Lineshaft?

A Lineshaft is a power driven rotating shaft that was used extensively from the industrial revolution until the early 20th century. Power was distributed from the shaft to the machinery (i.e. the water pump) by a system of belts and pulleys. Prior to the advent of electric motors, the central power source could have been a waterwheel, a windmill or turbine, a steam or gas engine or, as at Massington Pumping Station, an oil engine.

Some interesting facts...

PERCY HENRY PITMAN, HYDRAULIC ENGINEER AND PELTON WHEEL MANUFACTURER

In August 2018, the Waterworks Museum recognised the importance of the 'Pelton Wheel' in an inaugural weekend celebrating key water industry technologies. At the time we did not know that in the early years of the 20th century Herefordshire and, in particular, Ledbury had connections to an engineer who had enhanced the design and efficiency of the Pelton Wheel with patents filed in the UK and in the USA.



Pitman, who came from Prestwich in Cheshire, was educated in the northwest of England and became a member of the Institute of Mechanical Engineers in 1910. He started in the business of manufacturing Pelton Wheels in 1896 having previously worked for six years for firms in Manchester, Salford and Halifax.

We know from press advertisements that Percy was in business at Bosbury, near Ledbury, between 1903 and 1907 before he moved to Crophorne, near Pershore. This coincided with his marriage to the daughter of the vicar of Crophorne in June 1907. The 1901 census reveals that his wife's brother was also a civil engineer which may explain how the couple came to meet.

Pitman's business had been sufficiently successful that by 1911 he had moved to premises in Acton in London and by 1915 he was based at Victoria Street in central London. During this period he registered a number of patented improvements to the Pelton Wheel and he was supplying his designs for projects across the globe.

The latest mechanical toy, the Tango Motor. This interesting novelty is a tremendous success. Price only 5s 6d, or complete set of parts with instructions to build 3s 3d. Description list and photo 3d.

WHERE DOES LEDBURY'S DRINKING WATER COME FROM TODAY?



Broomy Hill WTW Control Room (2000)

Since the summer of 1978 when the 'modern' water treatment works was built at Broomy Hill the drinking water supplied to the residents of Ledbury has come from the River Wye. The treated water is pumped to a covered reservoir on higher ground at Bewdley Bank, Burghill and then onwards to Ledbury (Bradlow) Service Reservoir for local distribution. Some villages to the south of Ledbury also receive Broomy Hill water, but via Ridge Hill reservoir in the Malvern Hills and then from

MASSINGTON WATERWORKS - KEY DATES

Dec 1896	Decision to proceed with new works
Oct 1899	Engines pumped water for first time to high pressure reservoir at Cross Hands
Nov 1929	2nd well sunk at Massington
Mar 1942	Extra water brought in from Bromsberrow (Malvern UDC)
Jun 1942	Water supply chlorinated for first time
Feb 1951	Electrification of Massington works
Jul 1978	Water supplied from Broomy Hill, Hereford: Massington initially kept as standby source
Jul 2017	Massington Lineshaft exhibit opens at the

"A few weeks ago a transformation was quietly affected in the method of supplying Ledbury with water from Massington Pumping Station. Before this transformation, the pumping station was filled with clamour from the engines and thumping of the pumping shafts. Today the place is peaceful. New pumping machinery was installed under the humdrum description of electrification, but is in fact a robot, possessing what appears to be human like

An interesting fact - today, Broomy Hill WTW supplies 57million litres of water every 24 hours, that's the equivalent of 660 bottles of water leaving