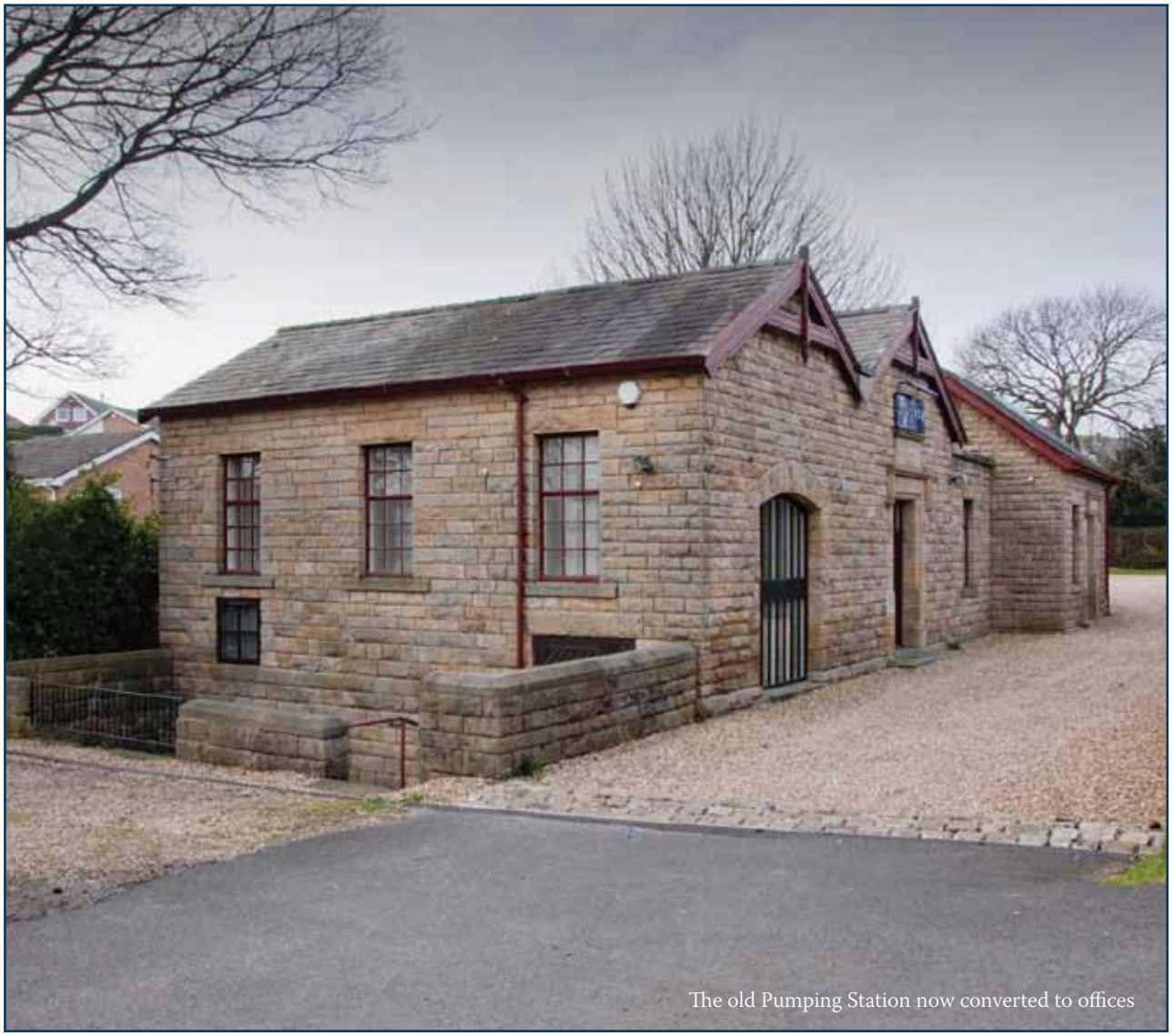
KINGSWOOD
HOMES

COMMEMORATIVE HISTORY OF CLAYTON LE WOODS SERVICE RESERVOIR

INTRODUCTION

In some ways the locally unique underground reservoir at Clayton le Woods is part of the spectrum of improvements to living conditions which became necessary as the Industrial Revolution transformed many of our towns and cities and gave Britain the industrial strength to gain and manage the greatest empire which the world has ever known. It was a local symbol of the civic pride and sense of moral duty which led to supplies of clean water drastically reducing scourges of cholera and other water-borne illness throughout our urban areas.



The old Pumping Station now converted to offices

The reservoir has now been redundant for many years, and United Utilities recently obtained planning permission its demolition to facilitate construction of local housing. Kingswood Homes and The Chorley Historical and Archaeological Society are delighted to invite members of the public to view the inside of the reservoir for a limited time, and have compiled the following brief history of the facility to encourage appreciation of its previous importance. It has not proved feasible to raise the funding required to make it commercially viable to preserve and provide permanent access to the site, and both Kingswood and the society encourage people to take full advantage of the access now provided.

THE INDUSTRIAL REVOLUTION

As the Industrial Revolution gained momentum and workers flocked to the towns and cities, sanitation and clean water became a major issue. The majority of water was obtained from rivers and wells which were often polluted with sewerage and public health became a national scandal. Frequently overcrowded domestic housing as well as industrial facilities suffered from lack of clean water.

The town of Leyland was no exception, and as central governments belatedly revised the system of local government to cope with problems in urban areas, improvements to facilities gained momentum during the second half of the nineteenth century. In 1863 the Leyland Local Board was established to instigate important works to improve public facilities in the town. By the 1880's it was realised that there was a drastic need to provide a new water supply and also a system of sewers to deal with the town's waste.

CONSTRUCTION OF A PUMPING STATION AND THE SERVICE RESERVOIR BY LEYLAND LOCAL BOARD AND LEYLAND WATERWORKS

In 1880 it was estimated that the overall cost of a new water supply would be £5,000. Surprise, surprise, costs escalated! By May 1882 a new estimate was produced which listed construction of a New Well, Cottage, Engine and Boiler, Reservoir, Iron pipes and fittings and laying the mains at £6,334 8sh 5d. By Aug 1882 the estimate had gone up to £8,500.

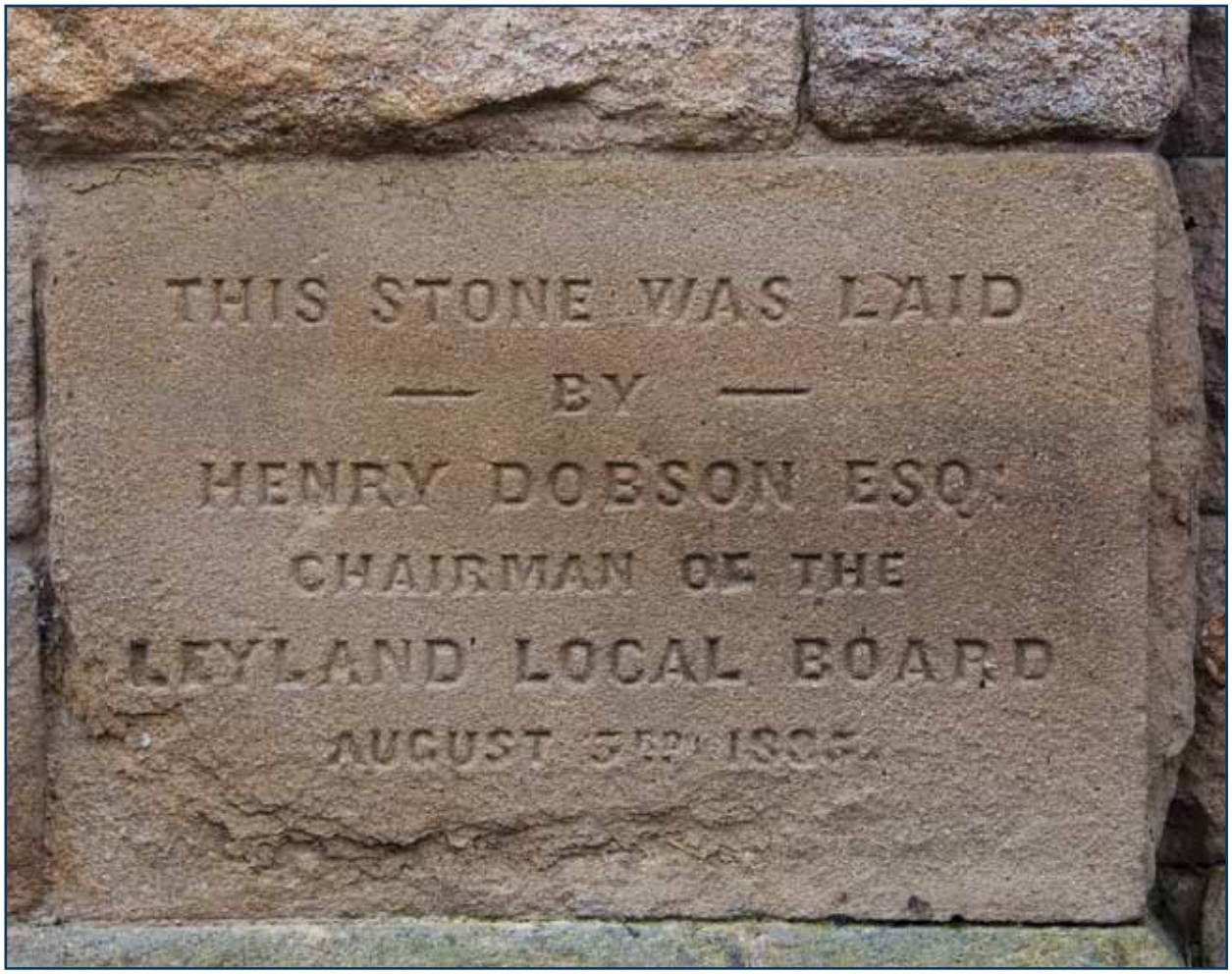
The construction of the Clayton-le-Woods Pumping Station and associated Service Reservoir (which is soon to be lost) was underway by 1883. However, there were complications. Trenches for water mains and sewers had to be dug through the main thoroughfares of Leyland - and it was not uncommon for carriages to crash into them! Compensation claims usually followed.

As was the custom, a civic ceremony to mark start of the works involved great local celebrations. A detailed report of the festivities associated with laying of the foundation stone for the pumping station appeared in the Preston Guardian on 4th Aug 1883 (see Appendix). We are still able to identify many of the local people involved. The stone was laid using a specially made trowel which afterwards was presented to Henry Dobson the Chairman of the Leyland Local Board. The trowel passed down through the Dobson family and still exists today, along with a mallet and magnificent presentation case.

OPERATION OF THE PUMPING STATION

The Pumping Station and Service Reservoir were largely built in 1884 (date stone on the Pumping Station building).

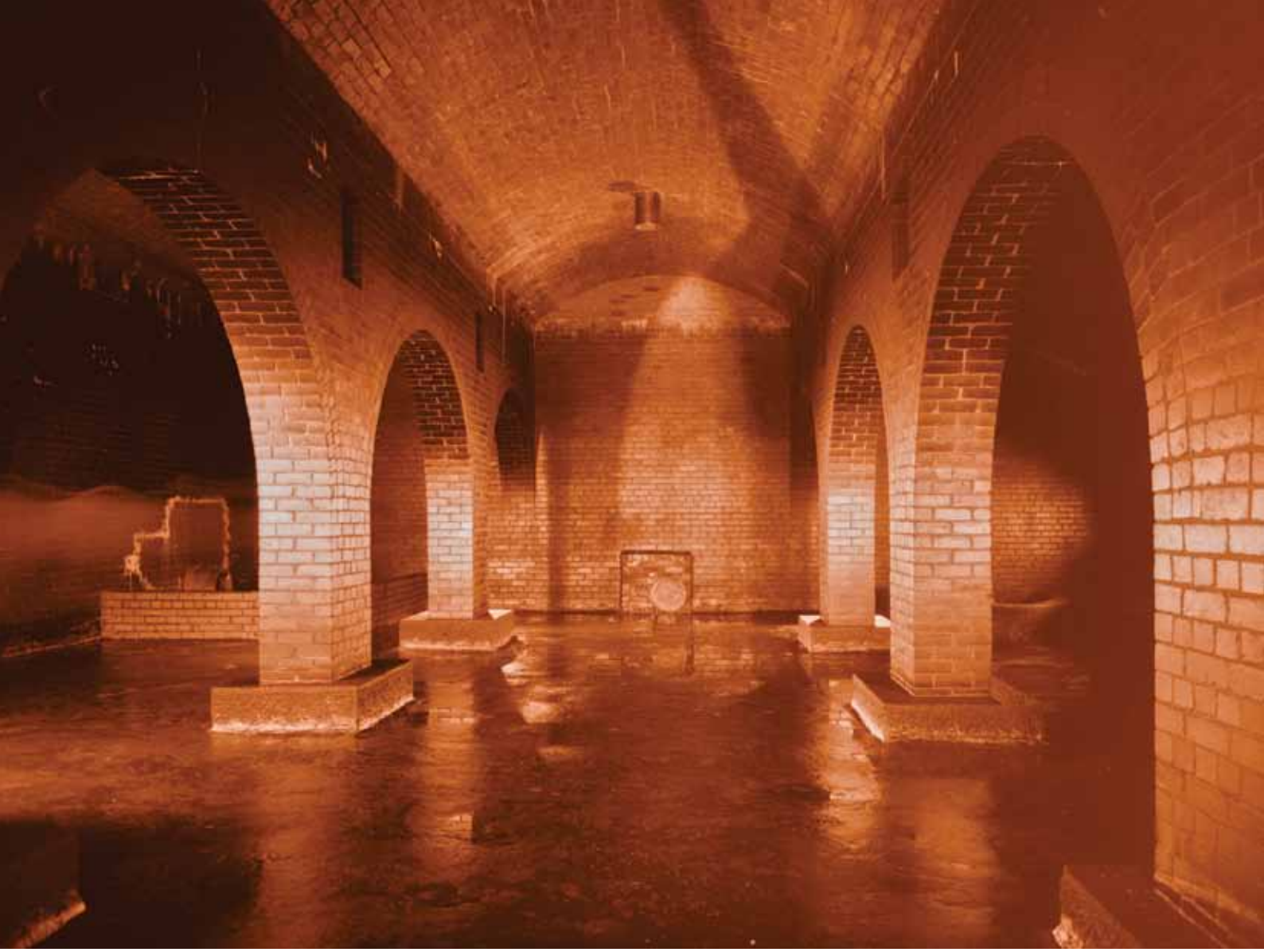
The Pumping Station [407 Preston Road SD 5788 2266] originally drew water with a steam engine and pump from a circular well approximately 25m deep with a diameter of 2m under the floor of the building. The well has now been filled in and the building converted to offices. The water was then pumped higher to the Service Reservoir and thence flowed by gravity through a cast iron pipe via Back Lane and Lancaster Lane to Leyland some 3.8km to the west. Unfortunately there are no known photographs of the steam engine, which was removed at an unknown date and replaced by an electrically driven submersible pump.



OPERATION OF THE RESERVOIR

The construction of the Service Reservoir is unique. Its vaulted brickwork is the only example of its type in the Chorley district. Similar reservoirs in the area are of concrete and iron pillar construction with flat concrete roofs. Although (see below) it was eventually taken out of service, it was kept full as a back-up facility right up until the 1980's and the brickwork was maintained in good condition.

By the late 1930's the reservoir was unable to provide sufficient water for the increasing population and expanding industries. Around 1940 a new and much larger underground reservoir was built of reinforced concrete on the opposite (west) side of Back Lane. Water continued to be supplied from the well under the pumping station, but was supplemented by a larger supply from Wheelton. A connection was made to the Thirlmere Aqueduct and a 2.3 mile water main was laid to the reservoirs. The new reservoir became the main source of water for the area, but (see above) the old Service Reservoir which we see now remained as a back-up facility for another 40 years.



HARD LUCK AND A LOCAL ANSWER!

By 1884 clear water was flowing into Leyland via The Pumping Station and Service Reservoir, but there were still problems. Because the well-water had come from an underground source, it was very 'hard' because it contained naturally occurring calcium minerals from the ground. Although safe to drink, it was not practical for washing as a it needed a much higher concentration of soap to neutralise the calcium. In industry it caused problems with boilers because calcium was deposited inside pipes.

It was suggested that people collect rainwater to use on washing days. However, local initiative prevailed. Some years later a limited back up 'soft' water supply was brought into the area from an up-land source. The supply was switched over from well-water on Sunday evenings so the Monday wash could be done in soft water, and then switched back to the well-water for the rest of the week!

Reference Notes:

Some notable people involved in the 1880's:
Henry Dobson – Chairman of the Leyland Local Board.
William Wrennall – Civil Engineer of Liverpool and overall Engineer of the works.
Joseph Clayton – Of Soho Foundry Preston, construction of pumping machinery.
Ebenezer Timmins – of Runcorn, sinking of the new well.
William Crook – Of Chorley, contractor for constructing of Reservoir, Pumping House and Keepers Cottage.

Acknowledgements:
History of Leyland and District by David Hunt.
Members of Chorley Historical and Archaeological Society.

LEYLAND WATERWORKS

Yesterday afternoon, the ceremony of laying a foundation stone in connection with the waterworks took place at the pumping station, near Clayton Green. Previous to the commencement of the works now in progress a well was sunk and a trail boring made on land fronting the highway in Clayton le Woods, near Clayton Green in order to test the suitability of the site for a pumping station. The trial boring passes mainly through beds of marle, shale and sandstone, and is carried down to 130 feet 6 inches from the surface into a thick bed of sandstone. The field of water has been tested at two different stages of the boring, and the supply found to be abundant. The quality has also been analysed by Doctor Campbell Brown and pronounced to be excellent water for domestic use. Following this result, the Leyland Local Board applied to the Local Government Board for sanction to borrow £8,000 in order to carry out a complete scheme of water supply for their district and in August last year Mr. Harrison, C.E., of the Local Government Board, held an enquiry at Leyland with reference to the proposed scheme. After making a searching examination of the details of the internal works, test of the field from the bore hole, geological formation of the strata, and other relative matters, he expressed himself satisfied with the scheme, and hoped that the Board might successfully carry it out.

Contracts were afterwards entered into and a commencement made on the various works in February last. The sinking of the new well, 8 foot in diameter, was let to Mr. Ebenezer Timmins, of Runcorn, who was also the contractor for the boring. The new well which seems to have been well executed is sunk to the required depth 70 feet, and the driving of a heading to connect this well with the borehole is now executed. The construction of the covered service reservoir, and the erection of the engine and boiler houses, engineer man's cottage, was let to Mr. William Crook, contractor, of Chorley. The reservoir which is constructed to hold about 300,000 gallons and is now nearly completed is substantially built of stone rubble in hydraulic mortar, backed with clay puddle, faced internally with brick lining in cement, arched over with brick, and the floor formed of concrete. The haunches of the arched roof are filled in concrete, the top coated with a layer of asphalted and covered with soil and drained. The cottage is built, and is with local stone shoddies and lined inside with brick. The concrete foundation for the engine and boiler houses and chimney have been got in, and the buildings are now in course of erection. The engine and boiler houses will be of local stone shoddies to match the cottage building, and backed with rubble. The chimney is to be of brick and square in plan. The contract for the pumping machinery is let to Joseph Clayton, of Soho Foundry, Preston. It consist of two twelve horse power horizontal high pressure condensing engines geared to drive two sets of pumps of the bucket and plunger type. The two boilers are each 16 feet long by five feet six inches in diameter. The whole of the machinery is in duplicate, so that in case of repairs or emergency the pumping operations need not be suspended. The pumps force the water through an eight inch rising main into the reservoir, which is placed 160 yards to the west of the pumping station and about 50 feet above the surface of the well. The pumping machinery is nearly ready for fixing. It appears to be substantial and good, and of first class workmanship. The water will be supplied to the district from the reservoir by gravitation through an 8 inch delivery main. The reservoir being at a considerable elevation above the district, about 180 feet above the village of Leyland, and 250 feet above the lower portion of the district, a very effective pressure in the mains will be secured. The water mains are being laid by Messrs. Walmsley and Co., of 82 Fishergate, Preston. The pipes have bored and turned joints, and are laid to a depth of 2 feet 6inches to the top of the pipes. The total length of the mains is about 8 miles a good progress is now being made with the work. The contract for supplying the pipes is being carried out by the Staveley Coal and Iron Company, of Staveley, Near Chesterfield. Messrs, Walsmsley and Co., have tested all the pipes on arrival by hydraulic pressure, and very few defects comparatively have been found. The cost of the whole scheme including the trial boring and nearly 2 acres of land is estimated at about £9.000. The whole of the works have been designed by Mr. William Wrennall, Civil Engineer, of Liverpool.

The members of the Board, accompanied by a number of guest, having viewed the station, reservoir and other objects of interest, they assembled at the station at four o'clock, the time agreed upon by the company. Amongst those present we noticed the following: - J.Stanning, Wm.Wrennall, C. Clayton, R.Veever, H.Dobson, and Chas.A.Timmins, Eqrs., the Rev. R.H. Bowers, Dr.Berry, and Messrs. Wall, J.Carr, E.Barber (Preston), J.Pilkington, Leece (late chief secretary with Mr.Wrennall), Hackforth, W, Swann, J.T. Timmins, Miller, A.Berry, Porter, R.Banester, Ascot (mechanical engineer for the work), Crook, Forrester, Durham, and Dunn. Previous to the ceremony being performed, Mr.Wm.Wrennall the engineer of the works) stepped forward, and handed to Mr.Dobson (the chairman of the board). who was about to lay the foundation stone, a handsome silver trowel, with beautiful carved silver blade and rich ivory handle, and a small mallet. Upon the trowel there was the following inscription:- "Presented to Henry Dobson, Esqr., Chairman of the Leyland Local Board, on laying the foundation stone,3rd August 1883, Leyland Waterworks. Engineer William Wrennall: contractors, Messrs. Ebenezer Timmins, Wm Crook, Edward Barber, Joseph Clayton, the Staveley Coal and Iron Company." In presenting the same to him. Mr.Wrennall remarked that he had the very greatest pleasure in asking Mr.Dobson to kindly accept the presentation trowel and mallet. He was sure it would be gratifying to him to a certain extent, to find that they were appreciating his efforts to such an extent that they were very pleased indeed to make him that little token of their acknowledgement of the services he had rendered, and for the interest he had taken in these works. In conclusion, he trusted that he (Mr. Dobson) would be pleased to lay the foundation-stone, and that the Leyland Waterworks would be carried on successfully and well.

Mr.Dobson suitably acknowledged the gift, and said: I now declare this stone well and truly laid, and I hope these works will be the means of supplying he inhabitants of Leyland for a very long time to come, and when these works are completed, I hope they will give satisfaction to all parties concerned in their erection. He then performed the ceremony of the laying the foundation stone of the new waterworks. The stone contained the inscription:- "This stone was laid by Henry Dobson, Esqr., chairman of the Leyland Local Board, August 3rd 1883"

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Brochure produced October 2013