THE WORKS



The Journal of The Friends of
The Twyford Waterworks Trust
August 2026

The Twyford Waterworks Trust
Company limited by guarantee 1904919.
Registered Charity No. 291720

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Front cover: The line up of full-sized steam traction engines at the May Open Day.
Photo: Richard Willock

Welcome to the Works!

I enjoy chatting to visitors. At the June Open Day I had the pleasure of meeting one who had last visited 20 years ago. 'Most impressive' he commented 'so many changes and a great day out. But I don't know how you all do it as volunteers – it must be quite a business'. 'Yes it is' I replied 'and thankfully our mighty team of volunteers tackle it all'.

TWT is a business, and just like any other we need to have a Business Plan to help direct us with every aspect of our operation. We are putting a new one together at present to set out our vision for the next five years, with an emphasis on continuing to keep the Waterworks a safe and friendly place that people will want to visit, will want to support as Friends and want to help as volunteers. We've been asking our volunteers for ideas and now it's everyone's turn to give us some thoughts and ideas!

What would you like to see at the Waterworks? Are there things that we could do differently, is there anything that you would really like to see – from the simplest idea to ambitious changes, we want to hear them please. Simply drop your thoughts on an email to friends@twyfordwaterworks.co.uk, speak to myself or Lesley at an Open Day or give me a call on 01929 552973 – many thanks. Before we know where we are it will be AGM time, and your invitation is included with this mailing. I look forward to seeing you there if you can make it. With warm thanks for your support.

Graham Feldwick



Setting up for an open day: the team putting up the marquee; a vital task to provide undercover accommodation for our exhibitors and visitors from the sun and rain!

Internal Combustion Team

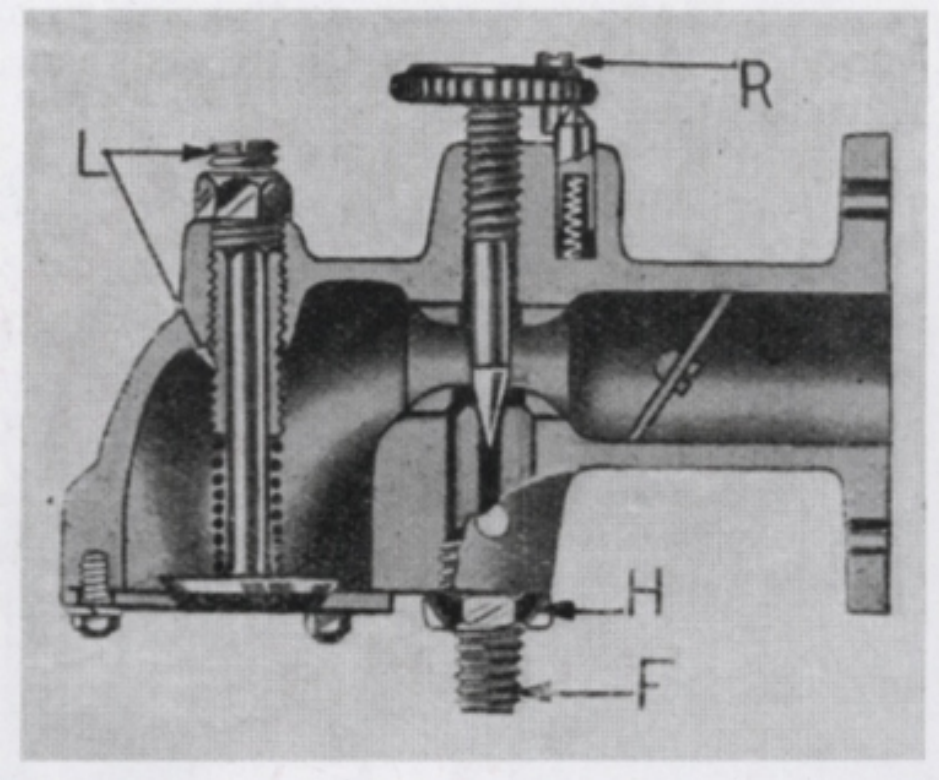
Preparing for the Open Day season requires our team to thoroughly check and prepare of all the engines, and reconnect the water pipes on the large Ruston diesels, which are drained each winter and refilled with cooling water. Once reassembled, functional testing is carried out, which gives us an excellent opportunity to ensure team members are trained in the safe operation of the running exhibits for the Open Days.

So far this season the Open Days have gone well with lots of interest and few operating issues. We have had minor issues with one of the air receivers and the Lister D that drives the Osbourne pump set.

Our air compressor in the workshop supplies compressed air to start the large diesels. As the air is compressed, it gets hot, and as it gets hot, it can absorb more moisture in the air; this is particularly noticeable when it is humid. As the air cools, some water collects in the bottom of the air receivers and to prevent this from causing corrosion we regularly drain the air receivers during operation.

This is done via a thin pipe running from a valve at the top of the air receiver to the bottom of it. The air pressure in the tank forces any water up the pipe and out of the tank when the valve is opened. This valve had become stuck on one of the air receivers, meaning we couldn’t drain the water; a strip-down of the valve and a clean has resolved the issue.

R. A. Lister sold their first type “D” engine 100 years ago, in November 1926. Although the design saw modifications throughout production, which lasted until 1964, one area that saw only minor changes was the carburettor. Originally designed as a “Suction” carburettor, with the fuel tank below the level of the carburettor as shown in the original here.



One change was to raise the tank, so the petrol was gravity fed, the fuel level being maintained by a simple float and needle valve in a bowl that connects to the carburettor at “F”. As the fuel level in the bowl drops, the needle valve opens and allows more fuel in. As the fuel level rises the float rises, closing the needle valve.

One feature of this Carburettor design is that the operator can control the air-fuel mixture by adjusting the wheel attached to the needle valve. As the engine warms up, the mixture needs adjustment to get it running well. We noticed during the May and June Open Days that the Lister D attached to the Osbourne Pump Set was running rich causing it to occasionally stop, adjusting the needle was not having the desired effect, so the carburettor has been removed from the engine and stripped down and cleaned to address this issue.



Chris Harvey

View from the Kiosk

2025 was a very special year as we celebrated 125 Years of Water Supply and now 2026 brings a new chapter in the book of Twyford Waterworks. We are already in August with five Open Days enjoyed by many hundreds of visitors and friends, and looking forward to more.

The Kiosk team so enjoy the various duties we carry out. Greeting you and seeing regular faces we recognise, or welcoming new visitors to our Open Day, sorting admission tickets and gift aid, general conversations and giving out information about all that is going on: Exhibitors, guided tours, tasty homemade cakes and BBQ, plus the Wildlife area and the pond, the Discovery Zone, Steam, Diesels, Railway, and Limekilns. Not forgetting the Twyford Toad Trail and activities!

So much to tell you about when you arrive and by the end of the day most of us have worn our voices out chatting and being part of a great team that love seeing and welcoming you all. Please spread the word and tell your friends about the Twyford Waterworks and what it has to offer. So many people say they have driven past numerous times, but when they finally make it to an Open Day it's really something special.

We are ALL VOLUNTEERS and do it because we enjoy it so much. When we all come together for an Open Day it works like a well oiled machine. If you would like to join our happy Kiosk team, we would love to hear from you! Please talk to us at an Open Day or contact Lesley.

Sue Cook, Richard Broadway and the Kiosk Team





Tales from the Tea Room and Barbecue

At our Open Days we offer not only our Tea Room with its wide range of excellent fare including, of course, our renowned cakes, but also our Barbecue which is also very popular with everyone.

The barbecue has been developed over many years and the BBQ team (and the Trust) is very proud of its current food hygiene '5' rating. The actual barbecue dated from 2017 and with careful use had given us great service, but this year has seen the arrival of a new barbecue. A great deal of consideration went into deciding on what the replacement should be. Many factors were considered, including cost, durability and serviceability. Best was one in stainless steel and we were able to purchase this thanks to a very generous donation.

Once assembled, many compliments were forthcoming as to its general shininess and the colours of the LEDs backlighting the knobs. The pretty colours being the most important thing, of course!

The new CosmoGrill was put into action for this season. Much was expected of it. And without any doubt, it performs brilliantly. The grilling area is larger (both wider and deeper) than before. The keep-warm shelf is also much larger. This means that the cooking rate has gone up considerably, providing us with a far more efficient process when demand escalates. And indeed it has! May Bank Holiday Monday was a huge day for the BBQ team with takings far exceeding any other open day on record.





Jim Jones



Garnier Road Beam Engine Centrifugal Governor to be restored

Brief History

Following the introduction of the Sanitary Act of 1866 Winchester City Council was obliged to provide ‘a sufficient sewerage system and a supply of wholesome water’. In 1867 Winchester City Council adopted the scheme provided by Mr James Lemon, at that time the Borough Surveyor for Southampton Corporation.

By 1878 the engine house at Garnier Road was completed together with the installation of two 43 hp single cylinder beam type engines manufactured by Gimson & Company of Leicester, steam being provided by three Lancashire boilers at a working pressure of 120 psi. Solid matter removed from the sewage screens was burnt, in 1884 a destructor was built to burn this waste, together with general household waste.

The beam engines were fitted with slide valves and hand adjusted Meyer cut-off valves. The sewage was pumped up to St Catherines Hill, where it percolated down through the chalk to emerge at the base of the hill as clean water.

In 1882 one of the engines suffered a major failure, probably due to overspeeding, and as part of the upgrade and repair of the engine the manufacturer fitted Watt pattern centrifugal governors to control the engine speed. The beam engines then continued in operation until 1959, when the engines were scrapped, and replaced by two 80 hp high speed compound steam engines driving vertical spindle centrifugal pumps mounted in the old beam engine pump chambers.

In 1975 the steam raising plant was finally closed and the old boiler house demolished, a new electrically operated pumping station being installed nearby. The old pumping plant building has now been refurbished as commercial premises.

The Watt Governor

The Watt governor operates on centrifugal force and consists of two balls, or flyweights, attached to pivoted arms connected to a central vertical spindle, fitted with a sleeve. As engine speed increases the balls spin faster and move outwards, this movement is translated into a vertical movement of the spindle, lifting the sleeve, which is mechanically linked to the steam throttle valve. When the sleeve rises the steam valve partially closes, reducing steam to the engine. Should the engine slow, the reverse occurs.



The governor in store for restoration. Photo: Andy Dickson

Some years ago the Trust was loaned one of the original Garnier Road beam engine governors and it has been held in storage until a suitable opportunity arose to dismantle, clean & re-assemble it for display with the other items from Garnier Road. To this end work has started on dismantling the governor ready for removal from the Rectifier House across to the Waterworks.

Andy Dickson



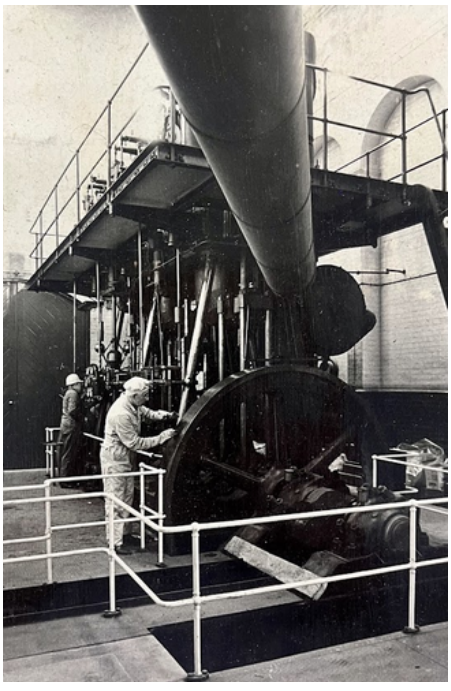
Andy and Steve having their photo taken by the cameraman from the Hampshire Chronicle while visitors look on during the June Open Day.

Photo: Matthew Feldwick

Twyford remembered – and rediscovered

I first saw Twyford Waterworks in the late 1970s. My father, Don Cottle, was a member of model engineering societies in Winchester and Southampton. These groups occasionally organised visits to local sites of engineering interest one of which was to Twyford. On my first trip, the Hathorn Davey engine had ceased working and I recall the engine house as dirty and gloomy.

I then found myself volunteering along with Dad and some of his fellow model engineers. I'm unsure of the exact date but I think it was in the early 80s. I don't know how things were organised - we were just willing hands who answered a call through one of the societies. The task at that point was conserving rather than restoring. I recall a fair bit of cleaning and then applying copious grease to the moving parts of the Hathorn Davey engine to protect it from corrosion.
Life subsequently took me in different directions. I moved and lost track of progress at Twyford. Dad died in 2015 leaving behind, among other things, a vast trove of photographs and in it I found several shots of the working visit years earlier. Unfortunately, in 2023, I was diagnosed with incurable prostate cancer. Suddenly finding oneself with a very limited life expectancy causes one to think back over life and work out what's really important. I compiled a "bucket list" and this included returning to Twyford.



When I finally made it in May 2025 I was truly delighted. The first thing that stood out was the friendly welcome. If you were the person on the gate or selling tickets or someone talking to me about one of the bits of machinery, you should know you made a real and important difference. I was also impressed by what I'd call the holistic approach here – not just a building with exhibits in it, but a complete site with multiple stories to tell. My partner too found much at Twyford that she loved.

The highlight was always going to be the Hathorn Davey engine, and it didn't disappoint. There's something about witnessing really big machinery in action close up that you just can't get from photos or video.

It was truly uplifting to see how far things had come from the dark days when it felt hopeless to think of the engine running again. It means a lot to me, even though I played only a tiny part at the very beginning. So thank you to all who've brought it about. I'm acutely aware that those of us privileged to carry living memories of such things will eventually be gone. Thankfully, at Twyford, something profound can live on for future generations.

Mark Cottle

Bishop's Waltham Men's Shed visits the Waterworks

In addition to our Open Days we also offer guided tours for groups at other times. One group has sent us a report of their visit on 3rd June.

The BWMS social coordinator was well aware of Twyford Waterworks and felt that it would be very interesting to many of its members. Following an initial meeting with Matthew and Dave last October, it was decided that we would visit in June. Everyone was absolutely fascinated and thoroughly enjoyed the whole experience. One of the highlights of the afternoon was when Matthew started one of the small engines, showing how water was pumped in either a house or farm in days gone by. Most of the guys felt sure they will be returning for one of the planned open days throughout the summer, for what promises to be a brilliant day out.



If you belong to a group or organisation why not suggest a visit to the Waterworks? All our tours are individually tailored to the interests of each group.

Dave Wallis

Twyford's original Industrial Railway

The Waterworks, like so many industries, once had its own narrow gauge railway. Nothing too grand, but fulfilling two vital tasks. Firstly it supplied coal for the boilers, and you can still see the track in the floor of the Boiler House, together with a small weighing platform and a circle of concrete where there was once a wagon turntable. The track ran from outside, with small wagons being loaded and pushed by hand. Each wagon was weighed as it entered the Boiler House to record how much coal was being used.

A second line supplied chalk and fuel to the kilns. Chalk was dug from the area we now call the Quarry, loaded into small wagons and hauled up an incline to a point near the Boiler House door. From there the wagons were pulled up a second incline to the charging floor in the kiln building. Wagons loaded with lime were pushed round to the lime store, using three wagon turntables to change tracks along the way. Although the Quarry was filled in during WW2 the route of the second incline can still be seen and much of the track around the kilns is still present.

The railways had been long disused by the time that our Trust was formed, and the wagons had been scrapped. Our Trust has reinstated a short section of track on the incline and installed an hydraulic winch similar to that originally used. More track has been added to house a collection of industrial locomotives and wagons, which can be seen in operation at Open Days.



The incline around 1909 from a photograph by FGO Stuart

Graham Feldwick

Wildlife at the Works

We had a very positive start on the wildlife with good environmental conditions for the early spring emerging butterflies. We saw record numbers for Orange-tip, Brimstone, Holy Blue and Painted Lady butterflies. Due to exposed tree roots on the wildlife trail a new path has been made to avoid these and we now have a lovely twisty path, and places to sit and relax under the shade of the trees.

The pond is now heavily overgrown despite a good deal of effort to cut everything back during the winter. We will be doing another big clearance this autumn/winter and if you would like to help the creaky oldies, it would be greatly appreciated. Unfortunately very few tadpoles or newts were found this year. Two frog and toad houses have been placed on the pond edge to give some shelter and help preserve the pond aquatic wildlife. Pond dipping is still very popular and we hope to enlarge the pond decking area and have a new entrance gate soon.



Badger and Roe deer footprints have been seen around the Pond. A trail camera will be fixed nearby, so we hope to see some interesting wildlife photos. Sadly we are not finding any small mammals, such as voles and shrews that were in the meadows, and slow worms or grass snakes have yet to be recorded too. External predators are probably to blame. Open Day wildflower signage is great at helping visitors with plant recognition and we are receiving positive feedback. Our Common Spotted Orchids on the bank by the Transfer House have had a good year, with 25 spikes counted.

Neil & Lynda Smith

Friends Update

A very warm welcome to new Friends:

Craig Aris & Maxine Sargent, Thomas & Lucy Browning, Colin & Teresa Bulpett, John Chorley & Angela Evans, Mark Coulson & Katharine Gregory, Ali Dolphin & friend, Peter & Lesley Donnison & friend, Mr & Mrs Dooley, David & Jacqui Hadley, David & Pam Hawkins, Alexander & Alice Humphreys, Scott Johnson & Sara Harris, Malcolm & Michelle Jones, Julian & Susan Martin, Robert O'Brien & Sarah Howard, Nigel & Sam Parrish & Hannah Izod, Mr & Mrs B Patel, Mervyn & Jeanna Simms, Mark & Marie Soulsby, Derek & Lois Spencer, David & Jill Stevenson, Nigel & Christina Thorley, Christopher & Debbie Vickers, Peter Whatley, and Andrew Withers & Neil Moore.

We were shocked and saddened to hear of the passing of Debbie Goddard and Chris Legg. Debbie has been a volunteer and supporter of Twyford Waterworks for many years. Always with a smile and light hearted comment, she will be greatly missed. Our thoughts are with Nigel, and her family and friends.

Chris has been a long standing, generous and enthusiastic Friend and we are very grateful for his support over the years. Our thoughts also are with Judy and his family and friends.

Congratulations go to Richard Broadway and Lorraine Harden who both celebrated 70th birthdays recently, and to Richard Willock, who was 50 in June.

If you've not already done so, please do renew your Friends membership for 2026 – email reminders have been sent to everyone. Just email me, or come along to one of the next Open Days to renew in person. Thank you for your support!

Lesley Feldwick



Monday 4th May saw the annual running day of the Friends of King Alfred Buses who provided a bustling half-hourly service throughout our event.

Here one of the preserved buses delivers its load of passengers ready to explore the Waterworks!

Photo: Matthew Feldwick

Twyford Waterworks

www.twyfordwaterworks.co.uk

2026 Open Days

3rd & 4th May 7th June 5th July

2nd August 6th September 4th October





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