WaterWords

Waterworks Museum News

Spring 2023

The Queen's Award for Voluntary Service

The MBE for volunteer groups

Steam Days are back for 2023!

Reception Staff were busy welcoming visitors throughout the day

Hereford and District Preservation Society exhibited an enviable collection of small stationary engines

Our first Steam Day of the year was held on Sunday 26th March, and was well supported by the general public.

It was gratifying to see people of all ages arrive at the Museum throughout the day, and they were rewarded with a very warm welcome from our Volunteers, and were able to enjoy the sights and sounds of our working engines and pumps. In fact, every engine in the Museum's collection that could run, did run, and it made for a very special atmosphere!

These included the ever popular Worth-Mackenzie Triple-Expansion Engine, the National Gas Engine and, making its public debut for the very first time, the newly refurbished and re-housed Sissons Engine. These, and all the other working exhibits "ran like clockwork", and were a true testament to all the volunteers who have devoted hours and hours of time and effort to produce such a splendid result.

For those many visitors who worked up a thirst and an appetite, the Café Staff were able to provide ample food and drink throughout the day. In fact, they were busy from start to finish of the day.

In addition to the splendid work done by our own Volunteers, we were joined by the Hereford and District Preservation Society and the Herefordshire & Gloucestershire Canal Trust.

The Hereford & District Preservation Society exhibited a comprehensive range of small stationary engines, classic cars and tractors, and added considerably to our own attractions. They were positioned on the Museum's forecourt.

The Herefordshire & Gloucestershire Canal Trust (who themselves received the prestigious Queen's Award for Voluntary Service in 2016) set up a very eye-catching display in the Visitor Centre and provided their own Volunteers who were on hand to explain the trust's very important aims and aspirations.

Visitors leaving the Museum were full of praise for what had been a fascinating experience, and very much appreciated the hard work and dedication of our volunteers who had laid on such a special day!

(continued overleaf)

The National Gas Engine, running under the careful supervision of Volunteers Clive Lafford and Tony Hodgson, attracted a large number of spectators throughout the Steam Day.

Outside the main building, the single-cylinder Wilson Oil Engine powered the Massington Lineshaft.

Museum News

Completion of work in the Southall Gallery

During Covid, the Museum adopted a "One-way" system for our Visitors to allow them to move around the bays and keep them safe. To facilitate this, a new elevated walkway was added onto the Southall gallery, with the intention of removing the internal glass wall. This would effectively open out the gallery and also give Visitors a new angle of view on the engines. The work to remove the glass wall has now been done and more recently, in time for the Steam Day on 26th March, a new safety barrier has been erected.

A Visitor looks on with interest as Volunteer Engineer Dave Winbow tends the 1931 Bamford Petrol/Paraffin Engine in the Southall Gallery

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Armed Forces Covenant

The Armed Forces Covenant is a pledge that together we acknowledge and understand that those who serve or who have served in the armed forces, and their families, should be treated with fairness and respect in the communities, economy and society they serve with their lives.

The Covenant is supported by Central Government Departments, Single Services, Local Authorities, Businesses, Charities, Communities and Cadet Forces and their Adult Volunteers.

Jill Phillips, our Chair of Trustee and Governance Director, was delighted to sign the Covenant in August 2022, on behalf of the Museum.

ARMED FORCES COVENANT

Museum Events

Throughout Winter 2022 and Spring 2023 the Museum has held Steam Days on three occasions. Pictures of the two 2022 events are shown below:

Steam Day, 9th October 2022

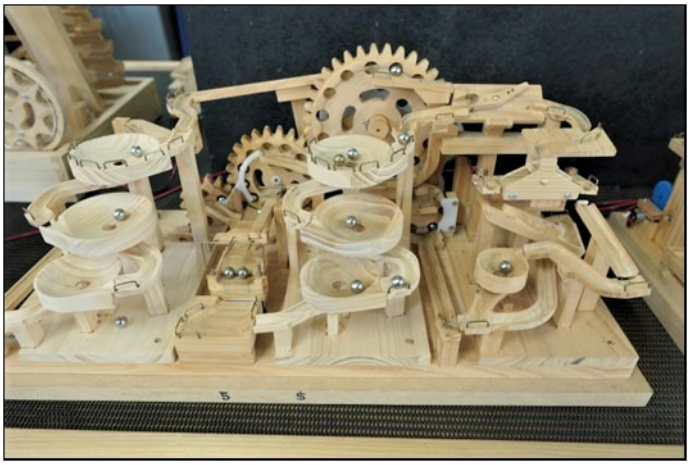
The Museum was delighted to host a range of Morris classic cars and vans on the forecourt during the Steam Day on 9th October. Indoors, at the same time, there was a working display of Stirling hot air engines.

Trustee and Volunteer Engineer Stan Lawler (right) stokes the fire of the 1/2h.p. hot air engine.

Steam Day, Halloween 2022

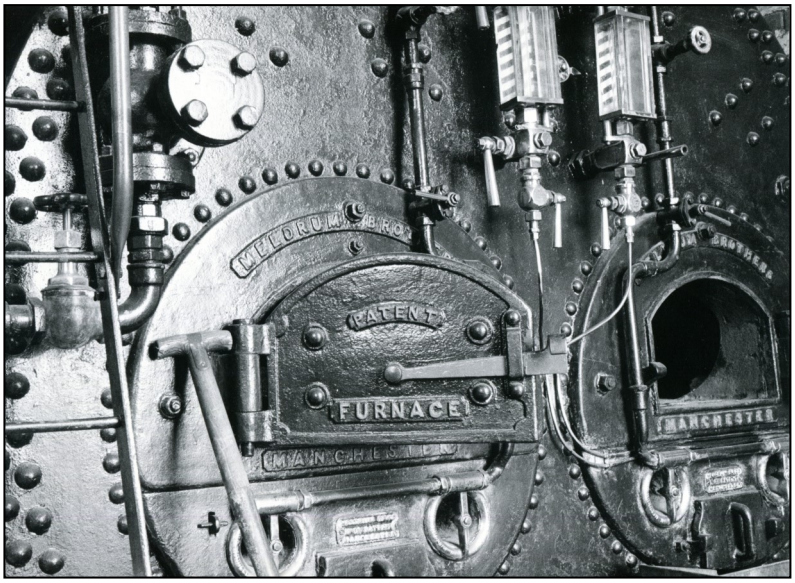
The picture on the left shows how Volunteers decorated the shop to reflect the Halloween theme of our Steam Day on 31st October 2022.

A number of indoor exhibits were housed in the Visitor Centre during this event, including this intricate and fascinating "Marble Run".



From the Archives…

Just a reminder to Museum Members, that the Archives are bursting with information about the Waterworks, pumps, turbines and engines, the supply of water across the county and further afield, and countless other gems of historical significance. Most of this is available to view and to loan, and if you need some help finding what interests you, don't hesitate to contact Fred Snelgrove, our Collections Manager, or his willing (if not necessarily, able) assistants.



As a taster, and also a reminder of just how far we have all come together since the Museum was first opened, we have reproduced below with his kind permission, an article written by Mr JL Townsend and included in the very first issue of the house magazine, "The Journal" dated July, 1975. In his article entitled "**Progress Towards Steam**", Mr Townsend describes some of the engineering work that had to be completed.

Both members and visitors must feel that the first, and possibly greatest, hurdle to be crossed in making the Museum a commercial success is the working of the two pumping engines under steam and work has been carried out towards this aim since long before the Museum was open to the public.

As an intermediate step it has been possible to work the smaller engine under compressed air at about 100 lbs/sq inch (690 kN/m^2) and this has entailed repacking all the cylinder glands, cleaning out and repacking all the grease caps and fitting a mechanical lubrication. The pump valves have also had to be removed to ensure that no pumping took place:

The triple-expansion engine however, although capable of being turned by 100 p.s.i. would require a far greater volume of air than a normal compressor could supply. Work on removing the gland packing proceeded relatively easily until it was necessary to turn the engine over in order that some of the valve and piston rods should be lowered to give better access to the glands.

The problem was that the engine would not turn largely because the packing had dried and seized tight and the packing could not be removed until the engine could be turned.

However, brute force in the shape of our friends from the County of Shropshire Traction Engine Society (no disrespect intended) applied to lengths of steel tube fixed to the flywheels as levers eventually enabled some movement to take place. Since then most of the rest of the packing has been removed from steam cylinders, valves and pumps and the engine can now be turned with the hand barring gear.

But for the steam itself our efforts have been directed to the Lancashire boiler of 1895. This was last used about twenty years ago and before it could be used again it was necessary by law to arrange for it to be insured.

Insurance under such circumstances would only be given after a very thorough examination of all parts of the boiler and fittings and following tests under hydraulic and steam pressure.

It was immediately evident from inspection that a major problem lay not in the boiler itself but in the brickwork surrounding it and forming the flues carrying the hot gases beneath it and to the chimney shaft. Some of the brickwork had collapsed, some was in imminent danger of doing so and some was badly eroded and eaten away by the flue gases.

The worst of this brickwork was at the back end of the boiler where the flues converge and pass out into the main shaft leading to the chimney. The collapsed walls and arches were removed and a good deal of unpleasant clearing of rubble and soot carried out much of it from within the extremely narrow and dark confines of the flues themselves. Here we have to thank largely the group of boys from Kingstone High School who carried out this task.

The boiler is made from a number of steel plates rivetted together and for the purposes of testing every seam must be exposed where it passes through brickwork. Thus in 24 places 9 to 12 inches thickness of brick had to be removed to reveal the seams along the top and bottom of the side flues. On the right hand flue this was easy as most of the bricks could be prized out being bedded only in a soft mortar. However, the left hand flue (rebuilt in comparatively recent years) was like granite and one seam alone took nearly one and a half hours to reveal, the bricks having to be chiselled away bit by bit.

This is difficult enough on the top of the flue where there is room to work but when crouching in the flue itself unable even to squat upright the problems are considerably greater.

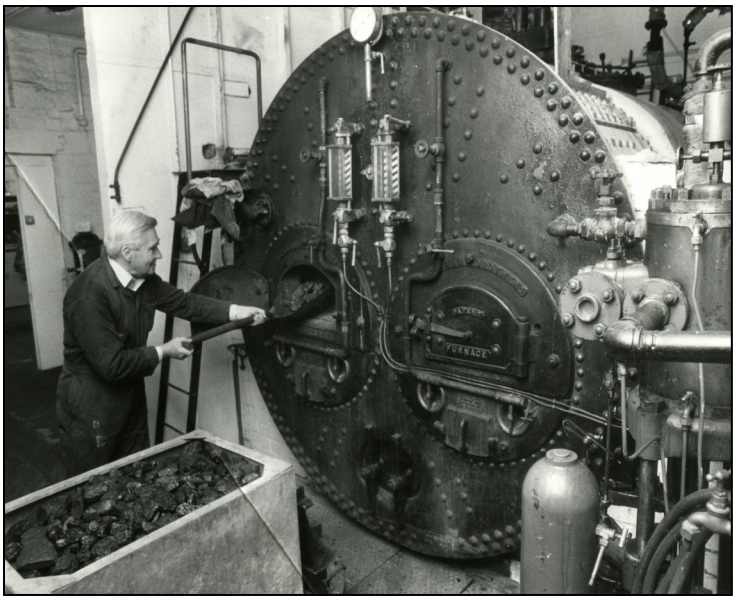
Descaling of the inner surface of the boiler shell was carried out manually by Park Holland & Co Ltd of Stoke-on-Trent and this firm has also removed all the fittings, fire hole fronts etc. They have also drilled several holes through the shell in order that the thickness may be checked. Assuming that the Boiler Inspector is satisfied with this thickness and the appearance of the seams, the mountings for the fittings will be blanked off, the boiler filled with water and a pressure will be applied and held over a period of time. Any pinholes or seam weaknesses will be revealed by leakage of water.

If the boiler withstands this test satisfactorily then Park Holland will return and rebuild the chimney flue and collapsed dividing chamber. Probably at the same time they will also install into the feed system to the boiler a feed pump donated to the Museum by Messrs Worthington-Simpson Ltd of Newark, Near Nottingham,

Since its construction water has been supplied to the boiler by a Penberthy injector on the backhead or by a pump driven direct from the crankshaft of the triple-expansion engine. Injectors are rarely 100% reliable, especially when used at a pressure, and the existing feed pump only operates when the large engine is being used. Hence the provision of an independent feed pump is a valuable safeguard. The pump from Newark is one removed from the firm's own boiler installation and is of the Vertical Simplex type with 7 inch diameter steam and 5 inch diameter water cylinders and a 12 inch stroke. Operating at 22 double strokes per minute the pump has a capacity of 2,000 gallons per hour and will probably be installed to the right of the boiler backhead.

At this point will be the long awaited moment, when the first fire can be lit very gingerly and built up gradually in order to warm the boiler and surrounding brickwork very slowly over a long period of time. This is to allow any dampness remaining in the bricks to dry out thoroughly and for expansion of the boiler and fittings to take place steadily.

Again the Boiler Inspector will be present to test the working of the safety valves and other fittings and if all is well then the time will have arrived to admit steam to one of the engines for an initial test.



The hard work paid off! Firing the Lancashire Boiler in 1990.

Engineering & Site Activities

The Sissons Display is now complete, and made its' public debut on 26th March. It was successfully steam tested on 16th March and the volunteers used the opportunity to carry out operator training on the triple-expansion engine.

Even before the completion of the Sissons Display, work had started on a new project to showcase a recently restored pumpset from the Brockington Estate, near Bromyard. Volunteers have also improved the entrance to the Museum's Meadow Car Park and dug out a trench along the rear perimeter fence line and back-filled it with topsoil so it is ready for hedge planting.

Volunteering & Education News

Welcome to our new volunteers

Since October 2022, a number of new volunteers have joined our ranks, including, Mike Aitken, Mick Connon, Ian Robinson, Ruth Stobbs, Keiren Sullivan, Paul Waldron, Steve Davies, Emily Cox and Tracey McGuire. A very warm welcome to each and all!

The Museum are still looking for volunteers, and if anyone would like to know more about current opportunities, please email us at volunteering@waterworksmuseum.org.uk

Primary School Visits

So far since the start of this year, the following Primary Schools have visited the Museum and have enjoyed a variety of activities led by Welsh Waters' teacher, Ruth Morris, :

- Lord Scudamore, Year 4,
- Almeley Eco Club,
- Orleton,
- Ashield Park, and
- Gorsley Goffs.

Pond Dipping remains one of the Children's favourite activities!

Chairman's Perspective

March 16th was a significant day for the museum!

The steam test run for the Sissons Display, proved to be a real success as the paired engines sounding so rhythmic and were a joy to listen to. It seemed to raise everyone's spirit and resolve. This had been a project carried across several years and relied on the ingenuity, problem solving and creative skills of all the volunteers. They have taken this project from just an idea into a refurbished and rehoused display. None of which should be underestimated.

I attended a course recently concerning reducing our carbon footprint and our museum has always been at the forefront of recycling, upcycling, revamping and caring about resources we use. We routinely consider these questions, in our approach to projects.

What a difference a year makes!

Last April we re-opened our doors with none of usknowing if our planned Steam Days would really happen through the year and ……..yes. We had a full, if unpredictable season, followed by a winter maintenance programme for the first time in three years.

I have great pride in being involved with you as a team of volunteers. You have demonstrated so admirably your efforts to resolve problems, be open minded and look at different approaches to making things 'happen'. On many Tuesdays, engines are maintained and site buildings cared for. All manner of items are made from scratch, whilst the archive team unearth artefacts and prepare the collections both physically and digitally. This all occurs during the weekly babble of children from the Education Program, who are enthusiastically exploring and dis-covering the magic of the museum and the exciting Waterpark.

Apparently, the level of decibels being decided by the engineers as their measure of a good children's day!

Visitors comment positively of their experiences of talking to the volunteers across the site and the café is becoming a major part of this experience including the shop goodies as well.

It is vitally important that this rich industrial heritage continues for the generations to come. As Simon Stephen, editor of *Museum Journal* commented 'Our communities are suffering at a time when the sector is also struggling to cope with rising costs and falling public funding'.

We are expanding our connections with the local and historical communities, with more group visits booked throughout this coming year. It clearly demonstrates how the museum is becoming a pivotal and flourishing place for learning.

Finally, I would like to thank all members of the museum for your continued help. Do make a note of dates for our Steam Days on page 8 and consider bringing friends and family along to the museum.

Let us all look forward to a busy summer season and hopefully soak in all that the museum offers.

Partner Brief

Welsh Water is delighted to support the Waterworks Museum in Hereford and is proud of the amazing work that the volunteers are doing to preserve and promote our water heritage. To have achieved full museum accreditation as a small charity run entirely by volunteers, is a testament to the expertise and professionalism of all involved.

The Museum has an important role to play protecting industrial collections, telling the stories of water supply and inspiring learning. So Welsh Water's Education team is pleased to work in partnership with the Waterworks Museum to provide a free education service for Herefordshire's schools, delivered by qualified primary teachers. With its historic engines, pumps, and artefacts, the Museum provides a rich learning resource for both formal and informal learning.

It was wonderful to see the volunteers' contribution to the services at the Museum recognised with the Queen's Award for Voluntary Service last year. This is an incredible accolade and very well deserved! Recognising the many benefits that volunteering provides, Welsh Water has recently appointed Michelle Impanni as Volunteering Manager. Michelle brings a wealth of experience in building links with diverse communities; developing volunteer opportunities that are accessible and inclusive; and supporting social prescribing initiatives that contribute to well-being. She is looking forward to working with the Museum to help attract and retain talented and committed volunteers.

Vicky Martin DCWW.

Key Events & Information

Forthcoming Events

The Museum is open every Tuesday for the rest of the year, with the following additional events planned up to the middle of October*:

Date	Event
Sunday 23rd April	Working Day / Classic Cars
Tuesday 25th April	Painting Club
Sunday 30th April	Steam Day
Sunday 14th May	Steam Day
Sunday 28th May	Steam Day / Blacksmithing Weekend
Sunday 11th June	Steam Day
Sunday 9th July	Steam Day
Sunday 13th August	Steam Day
Sunday 27th August	Steam Day
Sunday 10th September	Steam Day
Sunday 24th September	Steam Day
Sunday 8th October	Working Day

* Correct as at 23rd March 2023

Please be sure to check our website, www.waterworks.org.uk for the very latest information about these events.

Membership 2023

It's our membership which gives the Museum its solid base in the wider community. For just **£20** public members can support an award-winning industrial heritage museum, which comes with the benefits of:

- Free access to the museum on open days
- A say in the running of the museum at the AGM

The annual membership fee for Volunteers is £15. Membership fees for 2023 can be paid online via the Museum's website. Please use the button on the home page to take you to the Membership page and follow the instructions.

If you need any help with this please leave a message on **01432 342 192** or via treasurer@waterworksmuseum.org.uk and we'll get back to you.

QAVS Enamel Badges

Following on from the Award Ceremony in November, each Volunteer is entitled to an enamel QAVS Badge. Mike Harries has recently completed distributing these to individuals.

Contact us:

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