

Twyford Waterworks Trust

Company limited by guarantee Registered Number 1904919.
Registered Charity No. 291720
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Treasurer Richard Broadway, Caroline Hawkins

Board of Management

Ralph Scalf	Twyford Parish Council representative
Richard Izard	Winchester City Council representative
Mike Southgate	Winchester City Council (observer)
Cecily Sutton	Hampshire Buildings Preservation Trust
Peter Mason	Hampshire County Council representative
Nigel Woodham	Winchester Model and Engineering Society

Also Alastair Arnott, Geoff Bailey, Colin Billingham, John Bullen, Ray Caine, Alan Down, Matthew Feldwick, Martin Gregory, Pam Moore.

H.F. Return to Steam Team

Alastair Arnott, Geoff Bailey, Colin Billingham, Richard Broadway, Ray Caine, Alan Down, Will Etle, Graham Feldwick, Matthew Feldwick, Terry Forder-Stent, Martin Gregory, Ian Harden, Keith Hawkins, Mark Hodgson, Jim Jones, Mike Matthews, Morley Slade, Steve Smith.

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Tuesday Evening Gang	Matthew Feldwick	
Grounds Officer	Ian Harden	
Housekeeping	Ian Harden	
Archive Administrator	Terry Rittey	

From the Chairman.....

I'm writing this on a Sunday from a favourite vantage point by the lime kilns. The main buildings are spread below me, and the sound of hard work is echoing up from the team in the Diesel House. I can see and hear other activities too - Ian busy tidying the bushes along the front of the site, Ray and Steve planning the water supply to the engine condenser, Terry putting up new nature trail notices, Matthew working in the quarry under the already watchful eye of George (the latest member of our family) and more sounds of talking and laughter coming from the green container. Sundays at the Works are complemented by Tuesday evenings, which Terry has described further on in this edition.

After almost 6 months since our last Open Day, the new season is nearly upon us and it's time to tidy up the Works ready for the many visitors that we hope will come through the gates this year. There has been much work carried out all around the site, so there is plenty of restoration progress to see. As always, the Trust is most grateful for the dedicated volunteer teams that report for duty week by week to make things happen; we have several new members and needless to say a warm welcome awaits you if you wish to join in the fun! And, of course, you'll find



a very warm welcome at any of our events this year, and I look forward to meeting you at the Works in the weeks ahead.

Graham

Return to Steam – HLF Project

In the last Newsletter I hinted that we had an issue with our Return to Steam Project, and this has been taking more than its fair slice of time throughout the winter. Unfortunately, what was intended to be a routine survey before we started work in the Boiler House revealed the presence of asbestos which had not been identified during all the decontamination work in 2007. In particular this is on the boilers and was encapsulated with a special paint many years ago. Until this has been removed we cannot start the main restoration work, and we've had to reluctantly stand our appointed contractors down. The original asbestos removal was carried out by contractors working for Southern Water, our landlords, who we are working closely with to find a resolution. Asbestos removal is never easy and we know that our projected return to steam date will now be significantly delayed.

Our Board of Trustees is working hard on this, we are having regular discussions at all levels to keep the project focused and we are all determined to restart the work at the earliest opportunity. In the meantime, as you will read, the other parts of the project are progressing well, with the appointment of Suzanne Gill as our Volunteer & Events Manager, the production of a new Volunteer Handbook, the start of a review of our Health & Safety procedures and especially with the interpretation part of the project forging ahead. Although we are facing yet another year without steam we remain totally confident that all the strands of the project will finally come together in the not too distant future.

Graham



Congratulations to Matthew & Vicky on the birth of George, on 6th November 2012. Following on the family tradition, George has already become a 'regular' in the green container!

Filter House update

In 2008 a team from the Waterworks rescued a Tangeye well pump from a small building in a field just outside Sutton Scotney, to the north of Winchester. In the intervening years it was completely stripped down and



rebuilt, largely by David Simpkin, before being put on temporary display just inside the Filter House. The eventual plan was to position it alongside the Crossley gas engine and its pump; something finally achieved in the first few weeks of the year. Inclement weather at the beginning of January provided the opportunity to start the project and by the end of the month the pump had been moved to its new location. Destined to provide the power a 1937 Lister CS was retrieved from storage. The engine, which had not run for over a decade, required little more than a change of oil and fuel before it started with only a few turns of the starting handle. It is in remarkably good original condition complete with items that are usually missing such as the fuel/water tank and wooden stand.

Because of the limited space for the installation, an ingenious, although traditional, belt drive solution has been devised. The engine powers a counter-shaft and, via a second belt, it in turn drives the fast and loose pulleys of the pump – a compact yet nevertheless interesting arrangement.

No date has been suggested for its launch into service: there are any number of jobs still to complete from a spot of welding and painting to final alignment and setting up a water supply for the pump – watch this space!

Matthew

The Interpretation Group

Money from our successful lottery grant is going towards reinterpreting the site - new signage, new display boards, an introductory video and the like. The board is represented on the interpretation group by Terry Forder-Stent and Martin Gregory which is being coordinated by Jocelyn Goddard and Natalie Chambers of Cultural Consulting.

The first part of the project out of the blocks has been to work with Twyford Saint Mary's County Primary School. Kim Noce, an award winning animator, has been working with the pupils on an animation film and it is looking to be an exciting introduction to the 'Works'. The pupils visited the works to draw items there and then Kim spent time in school with them on the animation. We are all looking forward to seeing the completed video. Another part of the project with Twyford CP School is a competition to provide a new face for our 'Twyford Toad'.

Work on the new display boards is moving forward but we do not want to get too far ahead of the work on the boilers. The approach will aim to help visitors at all levels with information throughout the site, telling our story at a simple level, at a level appropriate for the explorer family, at levels for curious minds and, in detail, for steam and diesel enthusiasts.

Martin Gregory



Introducing..... Suzanne Gill

I was delighted to commence work as the new Volunteer and Events Manager last November, and things have been pretty hectic since then. There was so much to do I hardly knew where to start!

I feel very lucky to be involved with the Waterworks at such an exciting time, at the beginning of a huge project that will have a really big impact on the site and all the people involved with it. It has been great to have the opportunity to meet so many volunteers working with the Trust, and to learn about the fascinating history of the works, and the exciting plans for the future. I am really looking forward to meeting all the rest of the volunteers as well.

We are very pleased to be working with Portsmouth University, as they help us with all the complex health and safety issues. I have also been working with Graham and others to develop a volunteer handbook, so everyone working with the Trust will have all the information they need

in one place. I am also in the process of developing role descriptions for all the different roles that are available at the works. This will help us to hopefully recruit more volunteers in the many roles that we will need as the Steam Project progresses. One of the most exciting aspects of the project are the areas of work that will provide completely new volunteer opportunities, such as interpretation, children's activities and external liaison.

Along with the enhanced events and wildlife work, we will truly have something for everyone, no matter what their interest; so if you'd like to get involved, do get in touch!

Suzanne Gill
Volunteer
and Events
Manager



Diesel House Report

Well it's all go in the Diesel section of the Works.

The 4VER engine is coming on in leaps and bounds thanks to a keen band of workers. It's mostly in primer on the bottom half, the topcoat has been applied to the crankcase doors and if it's anything to go by the finished engine should look superb.

We're now at the stage of stripping the bits we're going to use from the 3-cylinder engine, just hoping

that the water jackets in the heads are not blocked. All being equal it should just be a matter of swapping them over with a quick check of the injectors as No.1 cylinder dropped power last time it was run.

The 2PS in the Transfer House is now running after many years of inactivity thanks mainly to the sterling efforts of one of our new volunteers Mark. He has made the new bearing for it and given advice on starting (which worked) and pops in when time allows to tivate and fine tune. It will not be used all the time but will be run for demonstration purposes as befits an engine of that age.

The enclosure for the new Transfer House compressor is almost finished. A major undertaking for those of us used to working with spanners instead



of saws and chisels but all in all it should look the part at the back of the Transfer House being clad in (almost identical) tongue and groove. This will give us somewhere to hide the Petter Compressor which, ironically, started life as an airstart unit for a Ruston.

The Diesel House doors have suffered in all this wet weather and no longer fit so some adjustment is required. I don't mind hanging household doors but I think those are over the top for me!

The crack in the cylinder head of the VER is across the combustion chamber and a repair is not really viable. So it looks like we're going to have to get a new one cast. This could be an expensive job...

Geoff Bailey



Photo by Mark Tewkesbury

A Civil Engineer at Twyford Waterworks

The civil engineering profession covers a broad range of works from docks and harbours, roads, bridges, dams and tunnels, water supply and waste water disposal, to name the most common.

My own career started with dock work and then transferred to waste water drainage and treatment. All these works are too complex to rely on one profession, and we were constantly supported by structural and geo-technical engineers, mechanical and electrical engineers and biologists and environmental scientists.

The civil engineer is frequently the person who has to pull all the strands together and shape the project, and working this way, one learns a great deal about all aspects of a project.

The "Return to Steam" Project at Twyford has proved to be just such a project. The engineering definition required to turn the Trust's aspirations into defined contract details has covered a broad spectrum of engineering skills. Those that fell comfortably into the realm of civil engineering were the statutory consent applications, the external ground works, and the workshop foundations. (Though, to protect the Trust, it has been necessary to pay consultants to underwrite design work on certain items.)

I was well out of my depth trying to define the provision and renewal of the electrical installations, all be it with some input from various persons with electrical know how. Thankfully an electrical engineer, Morley Slade, then joined us and is sorting out the work schedule in a professional manner so it all will now be well thought out.

Then of course there is the steam engine and boilers. While I grew up with steam trains and love to see any steam plant in action, my understanding never got beyond the mechanical details.

I did not get to grips with the thermodynamic laws governing the behaviour of steam, but again we have the necessary knowledge on tap. Martin Gregory is well able to apply his extensive knowledge of physics to get to the bottom of a problem, and of course our practical

steam team members can advise from their first hand knowledge of the Twyford or other stationary steam engines.

A case in point is the cooling water supply for the engine exhaust steam condenser. The HLF Return to Steam Team looked at options for supplying this, and agreed on using the softening tank as a reservoir for the cold water discharged from the hydraulic engines. Concern for the integrity of the old tank led to a decision to only part fill it, and I have been looking at the detail for both the tank outlet and the pipe work needed to feed the water to the boiler house.

However, I could not calculate the flow rate required to condense the steam, and relied on Martin to do this. We still have to establish the characteristics of the existing pump to check whether it will provide the required flow rate. Meanwhile we can agree how many hours of operation the storage is required to provide, and I can work up the necessary details.

It is intended that a short weir wall is built around the tank outlet, so this needs to be designed to ensure its stability. I needed to seek the reassurance of a text book to convince myself that I had done the correct calculation. It may be small, but the principle is exactly the same as designing a large concrete dam. Routing the pipe work has been mainly an issue of practicality. Making new connections into the tank some five meters below ground would be disruptive and expensive, so we have to work with the existing connections, even if it means threading a smaller pipe through one of them.

So, I have seen my role as that of gathering all the knowledge and information I can from the my colleagues at Twyford, working with the external consultants, and using my professional background, to shape the overall package into a properly defined and specified whole.

Finally if you are interested in any of our proposals, I will always be happy to hear from you. Many of the drawings are displayed in the engine house. Experience and common sense go a long way in this type of project.

Ray Caine - Technical Manager, HLF Project

Give it a go

Winter is not the most inviting time to be out, especially when it is cold and dark, but a stalwart band of volunteers turn up at the Waterworks every Tuesday evening to do their bit.

Usually Matthew is there to unlock and open up the buildings, followed by the sight of car headlights by the entrance gate, opening of gates, driving in, closing gates, changing into work overalls and catching up with others in the volunteers mess room.

Everyone ensures that the tea urn has been turned on, then it's off to carry out various tasks which include:- cleaning and polishing the steam engine under the direction of Jim, renovation of engines and all the associated work, laying new flooring, etc. setting up engines and pumps with Matthew directing these operations, and assisting Geoff with the diesel engines and with his latest project..... making a hutch to house, no not his pet

rabbit, but an air pump at the back of the transfer house. Also a wall scraping team,

led by Colin, has spent several weeks preparing the engine room inside walls for re-decoration. The next stage is sealing the brickwork to stop the damp seeping through.

Around 8pm it's coffee or tea time and certain volunteers with the necessary experience collect orders and provide hopefully the right colour tea and coffee with the correct sugar content, or not, to the right volunteer, another tricky operation!

The evening draws to a close after light hearted banter in the mess room, locking up and leaving for home (or the pub). At 9.15pm you wouldn't know anyone had been there!

Terry Forder-Stent



Friends of Twyford Waterworks.....

After the cold, dark days of winter, we are looking forward to spring again, and I for one am hoping for a drier season this year!



Friends' subscription renewals are due on 1st April and despite increasing costs, we have been able to maintain membership at a minimum donation of £10 again for 2013. Thank you to everyone who has already renewed – either by Standing Order or cheque. Thank you especially to our monthly

supporters and those who have made an extra donation – your commitment to Twyford Waterworks is essential and very much appreciated. If you pay by Standing Order, joined the Friends later in the year, or have already responded to the recent renewal reminder, your new membership card is enclosed. If you haven't yet renewed, you will find a reminder and spare renewal form in this newsletter. The Find A Friend initiative is continuing throughout 2013, so if you enjoy your membership, and the benefits it brings (free admission on Open and Guided Tour days, newsletters, email updates and occasional social activities) please spread the word, and introduce a friend!

The Friends' Christmas event in December was a Skittles and Quiz evening at The Phoenix. The skittle alley was packed and we all had a really enjoyable time – congratulations to the winners, and very many thanks to Paul and Emma, and the staff at The Phoenix, who made the evening such a success.

Finally a very warm welcome to new Friends who have joined since the last newsletter: Mr & Mrs David Eaton, Susan & David Brace, Chris Fairlie, Joan Hicks, Kayt Marter-Brown, Mrs T Nielson, Mark Tewkesbury and Carol Tyrrell.

Lesley

WE NEED YOU ...

... to help us run the Waterworks!

We have volunteer roles to suit every interest. We are especially looking for people interested in the following:

Publicity and Marketing Officer

Includes advertising, media work, publications & promotions

Health and Safety Officer

Includes ensuring site safety, signs & hazards, working practices

Open Day Helpers

Includes working with the public, refreshments, kiosk & general duties

For information about these or other volunteer roles, please contact Graham on 01929 552973

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