

# Twyford Waterworks Trust

Company limited by guarantee Registered Number 1904919,  
Registered Charity No. 291720

President: Dr Edwin Course

Chairman: Graham Feldwick, 22A Ropers Lane, Wareham, Dorset BH20 4QT

Telephone: 01929 552973 . Email: chairman@twyfordwaterworks.co.uk

Vice Chairman

Terry Forder-Stent, 01962 712443

Secretary/Company Secretary

Mark Hodgson

Treasurer

Richard Broadway, Caroline Hawkins

## Board of Management

Ralph Scaiff

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 Geoff Bailey, Colin Billingham, Ray Caine, Alan Down,

Matthew Feldwick, Martin Gregory, Pam Moore, Steve Smith.

## HLF Return to Steam Team

Geoff Bailey, Colin Billingham, Richard Broadway, Ray Caine, Alan Down, Will

Ettle, Graham Feldwick, Matthew Feldwick, Terry Forder-Stent, Martin Gregory,

Ian Harden, Keith Hawkins, Mark Hodgson, Jim Jones, Mike Matthews, Morley

Slade, Steve Smith.

## Management Team

Administration Co-ordinator

Mark Hodgson

Volunteer & Events Manager

Suzanne Gill

Compliance / Health & Safety Co-ordinator

Ray Caine

Clerk of Works

Colin Billingham

Restoration Co-ordinators

Geoff Bailey, Alan Down, Matthew

Feldwick, Steve Smith

Terry Forder-Stent

Grounds Co-ordinator

Matthew Feldwick

Site Operations Co-ordinator

Martin Gregory

Heritage Co-ordinator

Friends Secretary

Lesley Feldwick 01929 552973

Publicity coordinator

Geoff Bailey 02380 556922

Open Day Co-ordinators

Matthew Feldwick 01962 714716

Martin Gregory 01962 861489

Guest Newsletter Editor

Vicky Feldwick 01962 714716

Webmaster

Graham Feldwick 01929 552973

Tuesday Evening Gang

Matthew Feldwick

Housekeeping

Ian Harden

Supported by  
**The National Lottery**  
through the Heritage Lottery Fund



## From the Chairman.....

**A**t the end of the year it's always good to pause to consider the achievements of the past 12 months, and here at the Works there are many that we can list. It's fair to say that we've had our share of challenges too, and none greater than the discovery of asbestos in the Boiler House at the very start of our long-awaited HLF-funded Return to Steam Project. Now at last we are putting all that behind us and, as I write this, contractors working for our Trust are completing a five-week asbestos



cleaning process which will enable us to restart the restoration of the boilers in 2014. All of this is the result of many patient hours of planning, drawing up specifications, discussion and negotiation. The cost of the asbestos removal was far too much for our Trust to find, especially as we are already stretched by our commitment to the main project, and we are most grateful for the welcome boost of a significant financial contribution by our landlords and good friends Southern Water. A major challenge is about to become a major achievement!

If you visited the Works for the October Open Day then you couldn't have failed to notice all the scaffolding around the main buildings in preparation for the roof works, and these are now proceeding through the winter months. This project is being managed by Southern Water with significant Trust input to ensure that the work is planned around our activities, and we thank the contractors BTU for incorporating our requirements into their schedules. The work is a huge undertaking, but

the result will be to give us buildings that will soundly house everything we restore and maintain for many years to come.

As you'll read further on, other parts of the HLF Project are continuing apace, and together with the impressive work carried out by our volunteers we have, yet again, achieved much. One important change has been the formation of our Management Team, as outlined in the last edition of 'The Works' and it's good now to have a team working together to steer our course through all the changes ahead of us.

We are shortly to say goodbye to the Eastleigh & District Model Boat Club after almost 10 years at the Works. With various Trust projects planned for the future, our Board of Trustees was unable to offer the Boat Club a further long-term agreement, and we are pleased that they have already found a new home in the area. Many thanks to you all for your support for our Open Days since 2004, and we wish you well for the future.

With very best wishes for this Christmas season and for the new year,  
Graham

## HLF Return to Steam Project

The discovery of the asbestos in the Boiler House has seriously affected the boiler restoration but also just about every other aspect of the HLF-funded project, as all are interlinked and couldn't proceed without the rest. Sorting all this out has been the responsibility of the Project Team – Terry, Ray, Suzanne, Martin, Steve, myself, Jason Lowe of Conservation Plus and Chris Hore of Selway Joyce – who have been meeting regularly by kind invitation of Chris at his offices in Winchester. The purpose has been to keep the project focused and moving forward, ready for the time when we can really start the work.

All parts of the project remain essentially the same as they were when we intended to start in 2012, so the current task ahead of us now is to predict the likely start date for the restoration and building works and work with our contractors to find a date that fits in with their workload. Thankfully Chris handles most of this, as he has done for the appointment and management of

the asbestos work. In all this we also have to factor in our own events so that the site can be open on the dates that we are advertising. To keep this simple we've cut out the weekly opening next August, by the way, but at present do intend to be open on the first Sundays in the summer as usual.

Two areas of the project have made good headway this year – the Interpretation Group, led by Martin, and the outdoor 'Discovery Hut' – known by all as the Hide – led by Terry. Another important aspect is the work carried out by our HLF-funded Volunteer & Events Co-ordinator, Suzanne. All three aspects are highlighted in this newsletter.  
Graham



## Under Pressure

As the restoration is made in two halves and then rebuild of the 4VER joined by both a ring of rivets and a Ruston in the diesel very large weld, this assessed house is nearing working pressure would probably completion, Geoff decided that have been much lower than we we should re-commission the air would have liked. Mark was happy start receiver to ensure a plentiful for us to prepare the receiver for air supply when the time finally hydraulic testing, and also wanted comes to start the old lady. to inspect all the under-floor pipes connecting it to the compressor.

This particular receiver has sat unused for several decades, and The receiver was prepared for test has never been inspected by by blanking the top and bottom Zurich, who provide insurance ports, completely filling with water, cover for all the Trust's pressure and then connecting a hand vessels. Mark Ballard, our surveyor operated hydraulic pump. The from Zurich, was approached, and pressure was slowly raised to its he had a good look at the receiver operating pressure, 300psi, and held which, fortunately, still has its there while Mark thoroughly original data plate soldered to its checked for any leaks. Any leaks at casing. Stamped on the plate are this stage would have rendered the its date of manufacture, (1936), its test a failure. The pressure was then operating pressure - 300psi, and its increased to 450 psi, which is one original test pressure - 600psi. If and a half times working pressure, these details were missing then the the usual standard for pressure receiver would have had to be vessel testing, again the pressure assessed by a structural engineer was maintained. As there was from Zurich, who would apply absolutely no leakage, or signs of modern design criteria to come up distress from the receiver, Mark with a working pressure. As the asked if we would be prepared to

take it up to its original test pressure rupture, as water is virtually of 600psi, we agreed, and slowly incompressible, the internal increased the pressure. At 600psi pressure would instantly dissipate, we trapped the pressure, and and apart from a loud bang and watched for 30 minutes, Mark's probably a large laundry bill, there large, dual scale test gauge did would be no secondary damage. not move at all in that time, a very If it were tested pressurised with air convincing test result indeed! and ruptured, then the resulting expanding gas release would be similar to a bomb detonating in the diesel house, with almost certainly fatal consequences. The casing is receiver stands 52 inches high and only 5/16 inch thick, so its strength is has a diameter of 24 inches. If we a real testament to 1930's material assume the top and bottom are technology, and the welder who hemispherical, then their combined joined it together nearly 80 years ago.

It is interesting to work out the internal forces on the receiver casing while pressurised. The receiver stands 52 inches high and has a diameter of 24 inches. If we assume the top and bottom are hemispherical, then their combined surface area is easily worked out by using the formula for the area of a sphere  $\pi d^2$ , which works out at 1810 sq inches. The remaining area of the cylindrical side is worked out by using the formula  $\pi d \times h$ , which works out at 2110 sq inches. Added together and multiplied by the test pressure - 600psi, gives the total force in pounds on the casing, which is 2,352,000lbs, dividing by 2240 gives the result in tons - a staggering 1050 tons! This is why the receiver is tested hydraulically, filled with water. If it were to

Alan Down





### The Hide and Wildlife

In August we were informed by Winchester City Council that we were successful with our application for an 'Active Community Project Grant' of £1,250.00. This money is being put towards the 'Hide' fixtures and fittings, [windows, shutters, shelves, bench seats, a curtain, ventilators etc.]. With £1000 from the 'Heritage Lottery Fund' project and £200 from Twyford Parish Council we are only £450 short of our budget for the project.

The basic 'Hide' was constructed by the Wednesday Conservation Group volunteers from the materials supplied by The Cottage Workshop. Following close on their heels the roof was weather-proofed by Steve Smith [TWT

Volunteer], who obtained a sponsorship of the materials from IKO plc. The two layers of felt were hot laid and should last for many years. Steve has also been busy with applying two coats of floor paint to the 'Hide' floor. Ventilators are in the process of being fixed and following research into the best sizes and installation methods, the windows for viewing the pond will soon be put in. We still have to source a wooden opening window of approx. 1.2 x 1.2m for the side of the hide - any offers? Recently we were very fortunate to be offered four good second hand bench seats for use in the 'Hide'. We will be carrying out a little work on them to spruce them up and bring them back to their former glory.



We are extremely grateful for the grants, sponsors, and the volunteers who have worked on this project. We are on schedule to have the 'Hide' finished by April 2014. Do come and see it on your next visit. Last week we were pleased to receive the good news from Winchester City Council that we were successful in our application for money to improve the paths around the Wildlife Meadows leading to the 'Hide'. The grant of £315 will be used for materials on this project. We are grateful to

The latest news on the pond is that it is full to the top again. The water level fell by about 300mm, through evaporation during the summer months but the recent rainfall, and the 'Hide' roof water directed into the pond, has restored the level. During the summer the pond was supporting a wealth of wildlife. Dragonflies were water beetles etc. and on one occasion four smooth newts.



Not so welcome was the overwhelming amount of Blanket Weed which we struggle to contain. Thanks go to Richard and Janet for their continual quest to control it, and for general TLC of the pond.

We are about to embark on the planting of a mixed selection of native Whips [trees] to form thickets by and near the pond, to encourage more birds to the site. The Hampshire and Isle of Wight Wildlife Trust suggested this, to give safe havens for birds using the site. Many sorts were in abundance, as safe havens for birds using the site were water beetles etc. and on one occasion four smooth newts.

Terry



for the Trust needs, especially if they are new to our organisation. It has information about our procedures; on working safely; key personnel and contacts; a map of the site; and our key policies, such as Health & Safety, Equality and Volunteering. The Handbook sets out clearly what we expect from our volunteers and what they can expect from us in turn, and includes what to do if specific incidents arise, such as an emergency or a complaint.

### Volunteer Handbook

**W**e are very pleased that the new Volunteer Handbook is ready to be issued to all our existing volunteers, together with a new Volunteer Registration form. This will give the Trust all the information it needs to ensure that we comply with safe practices, and that we can support our volunteers with their individual needs. It will also give us a clear picture of our volunteer workforce's skills, experience and knowledge, and identify where they will benefit from specific training in order to carry out or develop their role.

The Handbook contains all the information someone volunteering

A crucial element for the Trust in all the work carried out and public



events, is Health & Safety, and we have been fortunate in being supported in this by new volunteer Bob Miles, who has a lot of expertise in this field. Bob is helping us

- update our procedures and develop revised risk assessments to ensure that everyone is working as safely as possible.

Many of our volunteer roles now have formal Role Descriptions, which clarify tasks that are expected to be undertaken, and help to ensure that potential new recruits are aware of what will be involved. This also helps us to advertise our vacancies more widely, with organisations such as the Volunteer Bureau, which always require role descriptions for any vacancies they help to fill.

The Trust now has a recognised structure, with a Management

- Team in place. Each person is responsible for a specific area of work, but they all work together as a team to develop short and long term plans and goals for the Waterworks as a whole.

Work to enable the Trust to run



more professionally and efficiently is now well advanced, and will help us to manage the Return to Steam project, as well as effectively recruiting the new volunteers we will need moving forward. If you would like to be involved in any capacity, do get in touch – we have something for everyone!

Suzanne Gill

Volunteer & Events Manager

suzanne.gill412@gmail.com

## News from around the site

### Filter House

The internal scaffolding that has put a halt to work elsewhere has been of distinct benefit to the Filter House. With displaced volunteers looking for jobs a plan was devised to clear, sort and tidy the far end of the building. For those of you who have peered into the area beyond the barriers (or even tried to work in there) the change in the last couple of months is dramatic. No longer are there the vast quantities of tools, spares and machinery awaiting restoration, disorganised to point of chaos; but rather clear spaces for work and for equipment to be correctly stored. Even the nomadic plastic bags of nuts and bolts which were removed in haste from the Boiler House over ten years ago have been sorted ready for racking when the new workshop has been built. A major catalyst has been the new high-level lights which render the previously dark building, lit only by temporary lighting, into a superb working space.



The reorganisation has permitted more items to be moved into the building as well as consolidating equipment otherwise spread to different locations around the Waterworks. Consequently this is allowing objects, such as the Duke & Ockenden well pump from Marwell, to be assessed as future working exhibits.

The Climax pump, which is powered by the Crossley gas

engine, has had some public it is another step in the modifications made to its outflow restoration progress of the tanks. pipe. For the first time since it was installed it now pumps to a Amport House separate tank. This tank, in turn, will The ex-Southampton Power be piped to feed the ex-Sutton Station generator set is currently Scotney Tangye pump which will getting a make-over prior to circulate the water back into it installation. It is planned to power again. An overflow drain returns the large electrically driven pump excess water back into the from Amport House using this Climax's 'well.' The arrangement equipment. The component parts enables both pumps to be run have been extracted from the far independently or together end of the Filter House and both allowing visitors to see water being the Russell Newbury diesel engine physically moved by the and the dynamo are now in the machinery. process of assessment and renovation. Ken, during his exile

The filter tanks have not been from working in the Diesel House, forgotten either. A mixture of has made use of his professional original and replica wooden skills and is reconstructing a supports are currently being suitable switch board to add an inserted between the filter authentic ambiance to the elements. Designed to keep the completed project.

elements from moving or touching one another when in use most of these spacer bars had either rotted away or been lost in the period before the tanks arrived at the Works. Although not accessible to be seen by the



Matthew

The Open Day season is now behind us, and this year we were certainly much luckier with the weather! If you were able to visit The Works – thank you for coming, I'm sure you had an enjoyable time, and, like so many of our visitors this year, were able to take advantage of the warm sunshine to stroll around the site and use the picnic tables.

At a recent Board meeting, it was agreed that the membership rate will be kept at a minimum donation of £10 for 2014. So if you are looking for a special Christmas present, why not consider membership of the Friends of Twyford Waterworks? A Gift Membership taken out in December will extend right through to March 2015, enabling the recipient a full year's worth of free entry to our Open Days, newsletters and email updates. Just send me a note of their name and address, any message you would like included with their welcome letter, and a cheque for £10, and I'll make sure your gift arrives in good time for

With building works ongoing around the site at present, there will be no Christmas Friends' Event this year, but do look out for some celebrations scheduled for the Return to Steam – full details will be available later in 2014!

The number of Friends has grown in recent years, and I'm delighted that Chris Richardson has joined me in looking after the Friends of Twyford Waterworks recently, and you'll be hearing from us both in the future.

Finally a very warm welcome to Roger Ball, Jim Hay, Shirley Powell, Sally Rowe and Richard Spears who have joined the Friends since the last newsletter. With very best wishes to everyone for Christmas and the New Year.

Lesley

**Congratulations to Ian and Lorraine Harden who recently celebrated their silver wedding anniversary.**

**Wednesday 1st January: Guided Tours and Stationary Engine Crank-up**

**20th April: Easter Sunday Guided Tours**

**4th May: Spring Rally**

**1st June: Waterworks Open Day**

**6th July: Waterworks Open Day**

**3rd August: Waterworks Open Day**

**7th September: Waterworks Open Day**

**5th October: Autumn Rally**

**SARSEN PRESS**

Sarsen Press is an independent printing company that has been operating in Winchester for more than 30 years.

We provide a helpful personal service to individuals, businesses, charities and voluntary groups. We have high

standards and offer good value for money. We work with you to ensure that we produce exactly what you want.

Whenever possible we use Forestry Stewardship Certified and recycled paper.

You can supply your work to us by email or other computer media. Some jobs can be printed directly from your hard copy. Our graphic designers can also work with your copy to design and typeset your work.

We also do photocopying, guillotining, stapling, padding, collating, booklet making, wire binding, plastic comb binding, perfect binding (paperback books), book production, numbering, scoring, perforating, drilling and mailing.

**Sarsen Press, 22 Hyde Street, Winchester SO23 7DR**  
**info@sarsenpress.com • www.sarsenpress.com • 01962 854281**