

Twyford Waterworks Trust

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HLF Return to Steam Team

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Classic cars start to arrive for the Regis Car Club's Tour and Picnic in September. This rally was a great success with eighty cars taking part in the course. The Waterworks was used as a staging post and lunch stop.

From the Chairman...

So here we are again at the end of another year. What a year it's been for our Trust! Our list of achievements is very long, but right at the top is our HLF Return to Steam Project, which is now well advanced and on track to give us steam again at The Works in 2015. If you are a regular volunteer then you'll know what a herculean task this is! If you've visited for an Open Day recently then I'm sure that you will have seen all the activity that's been taking place, that's turned quite a bit of the Works into a construction site. From all the planning, the meetings, the endless emails and phone calls, the things that have gone well and the bits that we would rather forget, the contractors on site and the great teamwork, we are steadily heading towards our goals – there's still a long way to go with plenty of challenges before us but we'll get there.

This is very much a team effort and with so much still to do I make no apologies for asking everyone please to consider what else each of us can do to ensure that we get the project completed. Our stalwart volunteer teams are severely stretched at present, and we desperately need more people to join in. Please do consider this if you possibly can, and you can find more details on Lesley's Friends page. Many thanks!

I mentioned a list of achievements – included are our fantastic open days, work on the 4VER diesel engine, all the redecoration of the windows and doors, the official opening of the hide by the Mayor of Winchester, work in the Filter House, new doors for the Rectifier House, improvements to the railway, and the continued management of the site for our abundant wildlife, all only made possible through your support. Another great year!

HLF Return to Steam Project

Following on from our last Newsletter, our Project restarted on 7th July and is now about halfway through the scheduled work. Returning to steam is obviously the main thrust, but there are several other important parts which together are giving us a revitalised Waterworks which will enable us to show more clearly how water has been pumped for over 100 years, and to provide fit for purpose facilities for our volunteers and visitors.



1. Toilets – we've had temporary toilets in place now for several months to enable the original building to be completely rebuilt. This is at an advanced stage, with the drains and extension completed and the three toilets areas – Ladies, Gents and Disabled – are now being fitted out with a modern internal finish. Great care, under the watchful eye of English Heritage, has been taken to ensure that old and new blends seamlessly from the outside, with carefully chosen bricks and slates.
2. Workshop – a change to the specs required further approval from Winchester City Council which we've now got. The foundations are currently being constructed ready for the actual workshop building.
3. Boilers – McEwens dismantled the tubing from Boiler 1 in July, and are working on this at their Yorkshire base. The boiler brickwork has taken up a lot of time, but the results so far are well worth the effort. Boiler 1 now has its 'south' brickwork – including the refractory bricks – almost fully constructed, together with the flue wall and floor. Boiler 2 has most of its side brickwork completed – this will not be steamed so does not have the internal refractory brick wall. The finish is superb. Boiler 3's drum has been painted by volunteers, and its supporting wires are in place – this will form a key display in our 'discovery zone'.
4. Electrical rewiring of the Boiler and Engine Houses is to start shortly. One disappointment is that Southern Water has not as yet been able to increase our power supply as agreed in 2011 so we've modified our plans to work around this.

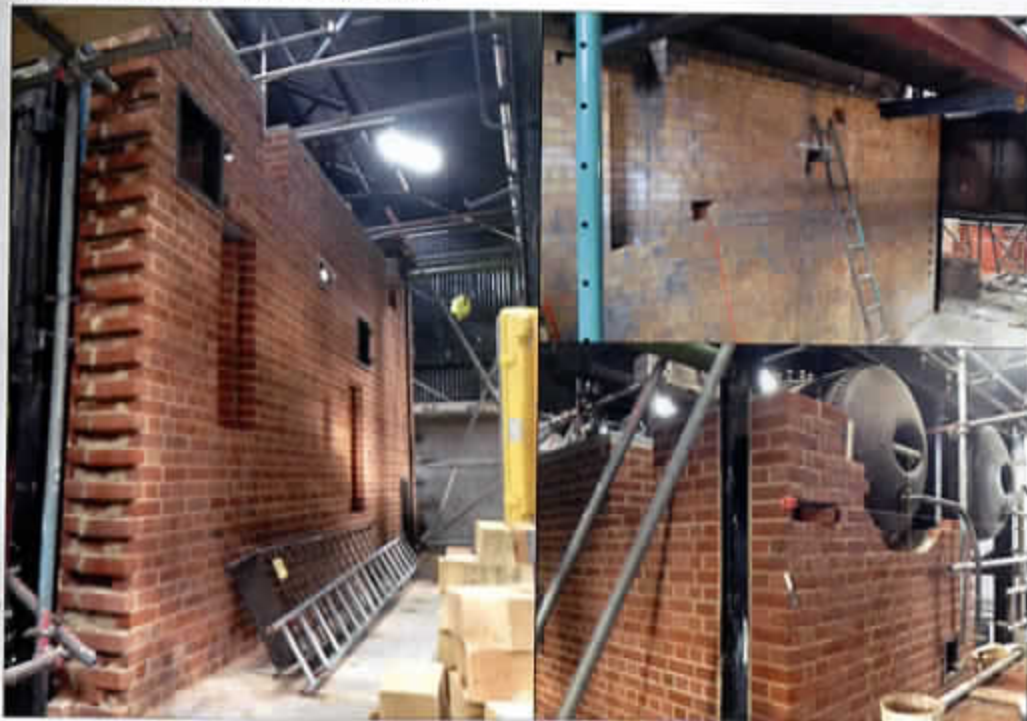
5. Redecoration of the Engine House interior is proceeding well, and is making a huge difference to the appearance of the building.
6. Work has now started on the sets outside the Tea Room, as a prelude to the whole area being resurfaced.

We are most fortunate to have such great companies working on this – Chris and James at Selway Joyce and Jason at ConservationPlus, Mike at Gregory Havant and our site manager Gary, and Alasdair at McEwens. We are equally fortunate to have such great volunteers!

Finally, if you've seen our animation film – put together in 2013 by Kim Noce and St Mary's Primary School in Twyford, then you'll not be surprised to learn that it's been winning some awards, and in particular the Best Children Contribution at the San Diego International Kids Film Festival and Best Animation in the Ecology section at IFFEST Document. Art festival in Romania. TWT goes global!

Boiler brickwork progress

The below photographs show what has been happening to the boilers over the past few weeks - impressive work!



TWT Butterflies 2014 Report

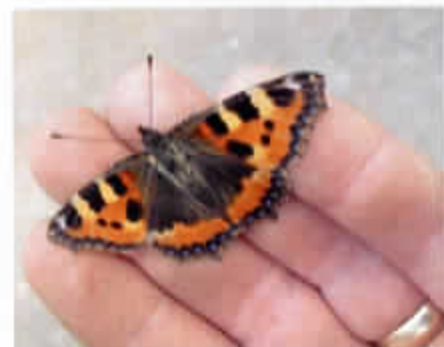
Butterflies are of interest and importance to us because they are beautiful creatures, and also because they have complicated lifestyles that make varied, and picky, demands on their environment – on rain and sunshine, the food-plants for their caterpillars, the nectar found in the particular flowers that they can use, places of shelter from predators and the weather, all in an infinite variety. These highly visible creatures can therefore reveal the health or sickness of the amazingly complex world of plants and living things that should exist in our fields, woods and hedgerows, and upon which we too depend for survival. When the butterflies, beetles, bees, birds and dragonflies are gone - we shall be gone too.



2014 has been a year of encouragement tempered with some disappointment and frustration. Firstly, the tall grass species such as Meadow Browns and Ringlets were about in good numbers, and more Marbled Whites than in any year since we started counting in 2008. It was also another excellent year for Skippers, both Large, Small and Essex, a trend that we hope will continue. In August we spotted a Dark Green Fritillary for the first time.

There was a good showing of Common Blues, a great advance upon 2012 when we did not see a single one in the whole summer. Even so, we think that there should be many more than 70 or 80 recorded given the amount of Birdsfoot Trefoil, short turf and ants' nests that we have. Perhaps they suffer from predators or our ant species do not include enough of the ones that nurture their caterpillars.

Secondly, on the down side there was a collapse in the numbers of Whites seen, both Large and Small – which may please gardeners, of course. Green-Veined Whites were also reduced in numbers though they depend on Garlic Mustard as a food plant, which is plentiful on our site. There was more disappointment over Green Hairstreaks and Small Coppers, both of which were seen as single individuals early in the summer but were not found later.



Overall the weather has been favourable and as I write at the end of October, there are still a few Brimstones and Peacocks to be seen whilst our resident Southern Hawker dragonfly is still patrolling the pond.

Richard and Janet

Mark Hodgson

It is with great sadness that we record that Mark passed away peacefully on 25th October, after a courageous battle against cancer.

Like so many of us Mark first visited the Works on an Open Day and became a Friend. At the time, in late 2009, we were asking Friends to complete a Questionnaire, and through this Mark offered us some help, which we quickly followed up. We had an important vacancy because our Secretary/ Company Secretary had just announced that he needed to step down and I remember



mentioning this in an email to Mark, who replied that he was a professional company secretary! So Mark joined us on the Board, becoming a Trustee in 2010. Mark really did come to the Trust in our hour of need and he was exactly who we needed to guide the Trust in the right direction. Mark has made a huge difference to the way that we have managed our affairs, and personally I will miss his quiet guidance and expertise.

Mark was always focused on the Waterworks, and yet there were many different aspects to his life, including being a member of the Company of Pikemen and Musketeers of the Honourable Artillery Company, a member of the Worshipful Company of Cooks and an honorary guide at Westminster Abbey.

Mark's funeral was on 20th November and our Trust was represented by Ray and myself. The service at St Botolph-without-Bishopsgate in London, and the wake at the headquarters of the Honourable Artillery Company, gave us just a glimpse of Mark's very full life as we gathered with so many to say our farewells to a real friend of the Waterworks.

Graham

Wildlife Area & Nature Trail Annual Report

Our Wildlife area and Nature Trail has again been extremely popular with our many visitors during the year.

The Wildflower meadows have had lots of flowering plants, many of which support our wide range of Butterflies (see Richard and Janet's separate Butterfly report). As is usual, each year we have a spectacular display of Cowslips to start off the season followed by many of our recorded wildflower plants flowering in a succession and ending with a magnificent display of blue/mauve Marjoram flowers that almost cover all of the lower meadow.

Over the last year we have recorded thirty seven different species of bird. Most prominent were the Wood Pigeons. However quietly you walk around the trail they always see you and take off with their familiar flapping of wings against the branches in their haste to fly off. During last winter a cock Pheasant decided the Nature trail was a safe haven away from the shoots that take place around the countryside. In January 2014, in the farmer's field by the pond fence line there were approximately one hundred and fifty Fieldfares. These winter visitors were making their way across the field looking for worms, grubs and insects in the grass that had been disturbed by the cattle. Several were in the trees as look-outs. Often heard but seldom seen are a pair of Bullfinches which inhabit our site. Their mournful chirp is sometimes replaced by a quiet squeaky warbling song. Of course we have seen lots of Blue Tits, Great Tits and during the winter groups of Long Tail Tits. A lone Heron was seen visiting the pond several times. In the spring we had a pair of Mallard ducks nesting on the island in the middle of the pond. They had nine eggs and although we kept a careful watch on most days, they presumably hatched and slipped away without us seeing them. All the eggs were gone and no sign of any ducklings. Our many nest boxes on the site have been well used by Blue Tits and Great Tits and a full survey of their use will be collated.



Birds seen on the site over the last year are as follows:-

Jackdaw, Rook, Crow, Buzzard, Kestrel, Barn Owl, Robin, Wren, Chaffinch, Bullfinch, Greenfinch, Green Woodpecker, Great Spotted Woodpecker, Heron, Magpie, Blue Tit, Great Tit, Coal Tit, Long Tail Tit, Blackbird, Fieldfare, Dunnock, House Sparrow, Jay, Goldfinch, Wood Pigeon, Collared Dove, Whitethroat, English Partridge, Pheasant, Swallow, House Martin, Pied Wagtail, Starling, Chiff Chaff, Tree Creeper, and Mallard.

We have Roe deer that regularly jump over the fences into the site at night and

then disappear during the day. Rabbits have seen a slight increase from the low numbers over the last three years. There are some young Rabbits around at present but again disease has started depleting them. Rabbits are useful for our flower meadows as they keep the grass down, encouraging other wild flowers to grow and flower in the short grass. Our volunteers have to simulate the Rabbit activity of eating the grass by cutting and raking it off the meadows. This nibbling or cutting is also of benefit to Butterflies - different species favour different heights of grass.

A young Fox has been seen on two occasions recently. We are aware that they come into the site but we rarely see them. Our site is also a strong-hold for Slow Worms - we often see them when moving stones or other materials on the site. They range in length from about three inches to fifteen inches.

A favourite place for visitors who walk the Nature Trail is the Pond which is now

three years old. It has established well with lots water plants, insects, bugs and wildlife taking up residence. The Hide/Storytelling Hut, which looks out over the pond was completed this year and was officially opened by the Mayor of Winchester on 3rd August 2014. We are very grateful to all those who gave grants and donations and provided help in constructing the Hut which greatly enhances the Wildlife experience. In May the pond had thousands of Tadpoles



clustered in large groups which were of great interest to visitors. Also in the pond and on view from the staging were several Smooth Newts - the second year they have been seen here. Later in the season the pond had lots of Damsel Flies and various Dragon Flies, plus a wealth of water insects. On the last two Open Days of the season there were still some large Southern Hawker Dragon Flies - very impressive with their double wings and abdominal segments of black and blue/green. These Dragon Flies are very inquisitive and hover like helicopters; investigating any movements or bright colours around the pond. Anyone with bright clothing had a visit from one or more of these Dragon Flies where they would hover two or three feet away to investigate. After a few seconds they continued their pond patrol. Quite spectacular.

Anyone interested in helping with our Wildlife area would be most welcome to join us - in particular we would welcome help on Open Days with stewarding the Nature trail. Please let me know if you are interested.

Terry

Around the Works

With the end of the open day season the working parties at the Waterworks gear up for the winter maintenance programme and, most importantly this year, the preparations for the Return to Steam project. Below is a quick round up of the tasks either completed or in progress.

Engine House

The first task in here was to empty the building of all portable items, chart recorders, display boards and anything else that would move. This was to allow as much room as possible to start painting the walls. This is a major exercise and has provided the opportunity to reorder the exhibits and displays when they go back. Paint brushes in hand we have spent the past few weeks working along the walls and it looks like we have a few more weeks to go before we're finished.



Diesel House

The repairs to the cylinder liner of the 4VER were completed in record time and the engine reassembled, with no leaks, for further testing and checking. Once again, when all seemed to be going to plan, it was detected that the clearances in one cylinder were now too tight – when turning the engine over the top of the piston was touching the bottom of the cylinder head. A further dismantling had then to take place to allow access to the big-end shims that govern this clearance. It is pleasing to report now that the engine is complete and testing can again resume.

Increasingly it appears that when the engine was stopped in the late 1960s it was dismantled for assessment before being quickly put back together again. Given that 46 years have elapsed since it last ran it is hardly surprising that there are a few faults coming to light, that said, the engine should be available to run for her eightieth birthday next year.

Rectifier House

The new replica doors for the Rectifier House have now been fitted. The original doors had been life expired for many years and on dismantling it was found that the paint was holding several areas together. These new doors have since been painted and now only require a further top coat in the spring.



Generator Room

The DC generating plant at the Works is an important survivor of the inter-war lighting sets so often employed in rural country houses, industrial sites and other commercial premises requiring an

alternative form of lighting to gas. The pumping station was lit by petrol-gas until around 1934 when the 240v DC Reader steam and Russell Newbery diesel engines and dynamos were installed. Part of the Boiler House refurbishment, as a volunteer project, is to get these engines back into working order. The steam engine is in apparent good



order but the Russell Newbery has suffered some severe frost damage to the engine block. The dismantling of the engine has recently been completed and the block will shortly be heading off to the Russell Newbery works near Rugby for their professional assessment.



Toilet Roof Vent Refurbishment



I has often been quoted that a week is a long time in politics; it is also a long time at the Waterworks, especially as the Return to Steam project progresses. Several times since the practical work has started calls have been made on the volunteers to identify components or to sort out other items for reuse. We normally deliver pretty speedily but not as fast as was required for the two toilet roof ventilators!

Part of the overall project is to improve and extend the toilets to provide the upgraded facilities we need and our visitors expect. Anyone who has studied the roof-line of this building (or been inside when it was raining) will be aware that it certainly needed some

refurbishment. The ornate ventilators were subsequently booked to be a volunteer led sub-project and they were handed over to us on a Friday evening – to be handed back fully renovated and painted the following Wednesday morning!

The 'Boyle's Patent "Air-Pump" Ventilator' is a triumph of Victorian engineering. Countless thousands were installed on public buildings or anywhere requiring good levels of ventilation. They came in a variety of sizes and designs for specific applications, such as the steam vents on the roof of the main building, but the majority, such as this pair, were used simply for venting toilets. Consisting of no moving parts the



baffles around the top chamber are arranged so that the movement of external air draws the stale from inside while preventing the ingress of rain, birds or other debris.

Initial inspection revealed that, although fundamentally sound, some repairs were needed to ensure their longevity. The worst area for corrosion was around the 'hat' of the vent – these had had minimal paint over the past century and were showing signs of decay. Repairs were made with correct gauge plate we fortuitously had in stock and were glued into position once the damaged areas had been cleaned and primed. A larger hole in one flue pipe was repaired with a plate, rolled to the correct radius, and riveted.

The preparation and repairs were completed on the Sunday, as was the first coat of primer. The next two days saw coats of paint being applied and we delivered a vastly improved pair of vents to the contractor on time. They are now back on the roof looking a great deal smarter than before.

Matthew



The works is a hive of activity as the building works progress. In these views, taken in mid-November, the toilet extension and roof is almost complete and the previously uneven surface is being re-laid. The prepared foundations for the workshop (below) await the first pour of concrete which will be left to harden before the structural steelwork is put up.



Friends of Twyford Waterworks Trust

We were very pleased to welcome so many Friends to the Open Days again this year. From the comments I heard I'm sure you enjoyed yourselves, and to every Friend, thank you, however you support the Trust.

With the Return to Steam Project in full swing our regular volunteer force is in urgent need of additional help. We currently have three main areas of work:



Collin and Chris working on the railway

Boiler and engine work – there's a lot of preparation to do on these, including some laborious tasks such as needle gunning firebars.

Decoration – redecoration of the Engine House is well underway but more hands are needed to complete this, and parts of the Boiler House.

Admin – we urgently need more people to form a team to prepare documentation, to work out how best to manage our open days once we are steaming, and to get involved in how we are going to present The Works to the public.

Yes, some of the work is quite physical but there's also a lot that isn't! Don't be afraid that you will need to spend more time than you could comfortably commit to, or that too much will be expected of you, or that you wouldn't 'fit in'. We are in need of all sorts of people – in fact, whatever skills, talents and experiences you have, we probably have a need for them right now! If you can help, and you like working in a team, phone me now for a chat. With Mark's sad passing we are currently in need of a Secretary/Company Secretary – if you have these skills could you help us please?

Finally, a very warm welcome to new Friends Mike Green and Jim and Helen Stirrup who have joined since the last newsletter. With all good wishes for Christmas and the New Year,

Lesley

Waterworks Railway

Visitors to the open days may have noticed that a smartly painted V-skip wagon has joined our running fleet. This wagon came from Hereford Waterworks Museum in 2012 with the Lister loco, and is the perfect size for our operations.



Perched up above the main site, one of the biggest challenges with the line is actually getting locomotives and stock to and from it! Driving a vehicle across the meadow is difficult and can cause damage to the chalk grassland, so this winter we are planning to lay an additional railway track up from the access gate. This will follow the existing nature trail path, and will give us the opportunity to widen and level this at the same time. We have the track panels for this in the quarry ready for use – if you could help on a few Sundays in the new year please let me know.

Matthew

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