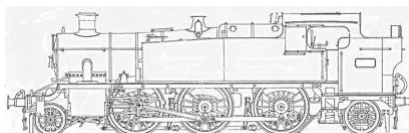


# *The 4150 Fund 2025 Newsletter CBS No. 8179*



## **4150 - Where old meets new (S. Beeston)**

The 4150 Fund is a Community Benefit Society overseen by The Financial Conduct Authority

Chairman:- Peter Maddicks (Trustee)

Secretary:- Peter Willoughby (Trustee)

Accounts prepared by :- Sylvia Hammond

Trustees:-

Peter Dodson, Dave Fulcher-Insull, David Massey, David McFall, Mike Hutt

### Front Cover - Cab Roof fitting

Having scratch built a new bunker and side tanks in the Bewdley Yard using only basic tools the fitting of the cab roof was always going to be a great unknown. However true to form our working volunteers once again came up trumps and with the minimum of fettling it slotted into place.



### Chairman's Report – Peter Maddicks

It was all the way back in 2006, when the fund was re-launched and the new team began the job of completing the restoration of the loco, a small but a dedicated team set to with enthusiasm. That team has now grown, we now have a group of up to ten volunteers working on the loco every Monday.

We have worked hard over the years to get to this stage, along the way some new faces have joined, some have left, and sadly some have passed away, but we are now getting very close. It is difficult, if not impossible, to estimate a completion date. When we first started we thought 10 years! That soon came and went, after a thorough examination of the bunker and tanks we had no option but to build new and of course Covid slowed us down as it did for everyone.

This year is an important one for railways, with the anniversary of the birth of modern railways as we know them. This year is not only the 200 years of the Stockton and Darlington Railway, but also 60 years of the Severn Valley Railway, 53 years of the 4150 Fund, and 19 years since the fund was re-launched. I find it hard to believe that the Fund has been in existence for over a quarter of the time since the Stockton and Darlington Railway started. It is also 60 years since 4150 was withdrawn from BR. service, therefore we will be working hard to try and get the loco in steam this year. It is possible, but it is going to require a huge effort by everyone.

The Trustees have begun discussions with the SVR regarding a running agreement, these are turning out to be very positive and we hope to have something to tell you at the AGM in September.

This year has seen a massive amount of work completed on the loco. In January the fireman's side tank was well on the way to completion, by June the tank build was finished and moved into the paint shop. By the end of June it was fitted onto the loco. At the same time work started on the second tank, by Christmas it was finished and fitted onto the loco, and after Christmas the cab roof was fitted. This is the first time that all the major components have been in one piece since the loco was dismantled many years ago. This is just a snapshot of the last 12 months. Tony will go into more detail in his engineering report. The financial position of the fund is stable, but we are spending more than ever as the expensive time is always as a restoration draws to a close.

We will also need to start to build the funds ready for the loco's overhaul once the boiler ticket runs out and **"Keep the Wheels Turning"**. We hope to start developing a strategy over the coming months.

On behalf of all the Trustees I would like to put on record our thanks to all of the volunteers who are working so hard, both on the administration and engineering side to get the project over the finish line. Thank you all. Then, there is you, the shareholders, a huge thank you all for your continued support, without it we would not be able to return 4150 to work on the Severn Valley Railway. Thank you all. Do not forget the Fund AGM on Saturday 6th. September at 1400hrs. at Kidderminster Railway Museum. Hope to see you there.

## Secretary's Report – Peter Willoughby

As always, firstly the time and date of this year's AGM is Saturday September 6<sup>th</sup> at 2.00pm. It will once again be held in the nursery building which is behind the Kidderminster Railway Museum on the right of the driveway that leads into the car park. The reason for this is that September is the art exhibition month and the big room is not available. As always the meeting agenda and last minutes are included within these pages.

Please be aware the SVR have an automatic number plate recognition system in the car park. However if you go to the King & Castle you will be able to enter your vehicle details when buying a drink so you won't have to pay.

Those of you that support the Fund by way of a monthly subscription should find your certificate in with this Newsletter showing the share accrued over the last financial year. Thanks to you all for this vital funding, it really does make a difference. If, since last year you have acquired an email address welcome to the 21st century and please share it with us. It is also important we have your current postal address and are kept informed of any corrections needed. [pww1946@gmail.com](mailto:pww1946@gmail.com) We are always in need of articles of general interest for the Newsletter, they do not have to be specifically 4150 or SVR related.

We are also able to turn any surplus transport related items into cash for The Fund so if you have any saleable items with a transport theme taking up space in your garage or shed please get in touch.

Nathan Lyons has put himself forward as a Trustee of The Fund as a response to the need to encourage new blood on to the Committee and below has introduced himself to the Shareholders.

I would like to thank Tony Howard for his Engineering report, Sylvia Hammond for preparing the accounts and Rob Massey for volunteering to audit the accounts. At the time of going to print the Accounts are subject to inspection by the Auditor.

Dear 4150 Fund Shareholders,

My name is Nathan Lyons, and I am interested in becoming a trustee of the fund, as was mentioned at the last Annual General Meeting. I am a current shareholder of the 4150 Fund and hold shares in the 2857 Society and the Severn Valley Railway. My background is in banking and finance, which I hope to utilize to once the engine is up and running. I am also the current finance chair of my local football referee association and have spent considerable time reorganizing their books and gaining a better understanding of the costs associated with the organization. This has brought stability to the referee association, and I hope to take those skills and apply them to the 4150 Fund. I look forward to working with the current trustees and shareholders to ensure the future of this locomotive.



Sincerely,

Nathan Lyons, MBA

## Engineering Report – Tony Howard

Most of 2024 was taken up with the construction of the water tanks. Whilst this operation was going on in the Boilershop, other teams were working on the loco itself. These included the steel steam pipes and stuffing boxes. This pipework is now with coded welder off site.

Another job we were asked to do was to remove the vacuum cylinder off the loco and check the IR (India Rubber) band. This came about following the failure of the IR band on Hagley Hall's tender brake cylinder. As our IR band was fitted at the same time we needed to check it was correct.

We removed the cylinder using the Crane in the shed, marked the position of the bolts and removed the piston. Luckily the IR band had been fitted correctly. The cylinder was re-assembled and put back onto the loco. We then decided to check it would retain the vacuum. A kit of gauges, blanking off valves and a number of long pipes to build a long pipeline to the 08 diesel which was used to create the vacuum. The gauges were attached along with the cut off valve. We were pleased that the vacuum was held for the required time. This operation will need to be done again so it can be checked by the full-time staff. We then adjusted the brake rigging to the correct position and the brakes were connected to the cylinder. The vacuum was tested by the full-time staff and passed. We could now re-attach the vacuum reservoir and put the large floor plate temporarily in position. This plate will need to be lifted off again in the future, so only a few bolts were fitted.

In the Boilershop the float arm and bracket were fitted into the right hand tank and the back plate was bolted in position ready for welding.

By the last week of May all the beading was riveted to the top of the tank and the brackets that hold the hand brake pedestal and the rear sand box operating lever were bolted on and the blanking plates were fitted on the front and rear apertures where the balance pipes fit. Lastly the water filler was welded on and the tank was now ready for filling with water for the first time.

The following day the tank was filled with water; there were a few minor leaks but nothing serious.

The next working day the tank was moved to the paint shop, and the right hand tank was shunted from the Hollybush siding and placed in the Boiler Shop ready for dismantling. Meanwhile on the loco the first section of the copper pipework that runs from the steam fountain to the injectors was made and temporarily fitted.

With the completed tank in the paint shop, we were asked to remove all the paint that had been applied to protect it while it was stood outside. With the second tank in the Boiler Shop we removed the two large back plates and the small joining plate as well as the two top plates. We could now alter the bolts that hold the front plates so there was a bolt in every other hole. Over the next few months sessions of riveting were done whenever we had access to the Boiler Shop.

We now began to remove some of the fittings that were trial fitted so the water and steam pipes could be made up, starting with the 10mm and 8mm injectors. The brackets that these fit to are behind the steps to the cab either side of the loco. These brackets were not quite level and had some rust damage. The brackets were repaired by Brian H, (full time staff) who is also making our copper pipework. The other items to be removed were the two rear sand boxes, again for working out the pipework runs and the vacuum retaining valve was looked at. We had two of the three items of pipework, the third needed shortening at an angle to line up with the pipe off the vacuum pump. This pipework is joined up using flexible hose.

We needed to fit the Steam Fountain so the steam pipework that was temporarily fitted earlier could be cut to length. This was done and the pipework was taken off, along with the steam fountain which still needed more machining done to it.

The left-hand water tank was painted up to half and half. That is half undercoat and half top coat. The tank was fitted to the loco. This is the first time the tank and boiler with the crinolines fitted have been all together. Before the boiler was lifted off the loco at Bewdley in 2017, the tanks were temporarily fitted to check the clearance between the back of the tank and the boiler, no crinolines had been fitted up to then, in fact no crinolines had been made.

It was no surprise then to find the front two crinolines were too close to the tank. We also noticed a slight bow in the tank due to all the heat produced by riveting and welding. A lot of fettling was needed, but we did eventually get the tank and crinolines to sit correctly with the correct clearance.

The regulator box also needed work, this was done by full time staff. The box was set up on the slotter and the inside face was machined. It then needed scraping flat, a very time consuming job as the regulator valve sits and moves on this face and needs to be steam tight.

Back on the loco we looked at the brake shaft to check on any work we may have to do. Straight away we discovered that the eight bolts that hold the brackets were not long enough. These bolts are 1" Whitworth and need to be 6 ½" long under the head, to take a full and half nut and a split pin. Whilst we were waiting for delivery of these bolts we cleaned up the brass bearings the shaft rotates in. We fitted the new bolts and also new grease nipples.

The rear sand boxes that had been removed a few weeks ago were put back.

The copper pipework is progressing well, and the piece that connects the steam fountain to the Masons valve (steam heat pressure controller) was trial fitted.

In the paint shop the two tool boxes were given their top coat of paint. The following week they were bolted on to the shelf in the cab. Work continues on the cladding between the tanks and the boiler.

The final two spring hanger bolts for the radial truck were now ready to be fitted. We would need the loco on a pit to fit them. These bolts are a modification to the original ones. To remove the original ones it would mean the removal of the bunker to get them out. The new ones are designed to be removed downwards. A full nut is fitted so just one thread is showing at the top of the nut. A hole is drilled through the nut and bolt and a large split pin stops the nut turning. We got the chance to get the loco on the pit and the bolts were fitted by pushing the bolt upwards, the nut screwed on until the holes lined up and the split pin was fitted and opened up. Another job completed was the pipework on the vacuum retaining valve, it was connected up using flexible hose.

We arranged for the loco to be moved onto the pit again, this time to fit the new copper water feed pipework from the bunker to the water valves. There are filters inside the water space to stop any grit getting into the injectors. The water valves are fitted via a ninety degree bend in a short section of copper pipe with flanges on both ends. The bolts go through the flange, a gasket, the stretcher plate, another gasket and finally the water valves. The other end of the water valves is a long copper pipe with a ninety degree bend at the inlet end with flanges each end. One end bolted to the bottom of the bunker; the other end goes to the water valves via gaskets. This took some meticulous measuring by all concerned.

We are now taking all the items off the loco in readiness for the boiler to come out of the frames for hydraulic and steam testing.

The right-hand tank is now finished and has been filled with water, again a few minor leaks, but nothing serious.

We are trying to arrange the loco to be shunted to the Boiler Shop so we can lift the tank onto the loco and return to the shed. This operation eventually took place on the last working Monday of the year.

First working day of 2025 was to get the right - hand tank to sit correctly. It was leaning inwards towards the boiler at the cab end. Using a jack and blocks of wood we eventually got the tank to sit upright. This allowed us to get the remaining fixing bolts in. We looked again at the left-hand tank and did the same operation.

Next job was to fit the cab roof, using the JCB the cab roof was lifted onto the loco, bolted to the bunker first. We then checked if the holes at the tanks lined up and they did. The cab roof was bolted down and the angles were bolted to the inside of the cab roof ready to be welded to the top of the tanks. Once this was done the next job was to fit the front window frames, again an excellent fit. Work was started on the cladding that covers the gap between the inside of the water tanks and the boiler. The loco needed to be shunted out of the shed, so as it would be outside for a few hours we took the opportunity to fill the bunker water space with water; this is the first time it has been fully filled. There were quite a few minor leaks around rivets, but a number of more serious leaks that need investigating.

The final riveting was done on the cab roof along with the 6mm rivets that secure the beading. The sliding shutters that sit either side of the cab were trial fitted. The drivers side needs a little fettling as it is a little stiff to move. The cladding that fills the gap between the water tanks and the boiler is being made.



## Working volunteers

We are all familiar with the sterling work carried out by our working volunteer team but within the group there are those that sometimes need to work independently from home or in other departments of the railway when they are not in use. For example the need for a dust free environment when painting or the need to use specialist tools. Here are a small example of those tasks that are vital to the restoration.

### Through the years - David F-I

I have been involved with 4150 34 years. The first picture is of me and Pete Simpson casting the big end bushes for the conrods, Pete was a great mentor to me and a huge supporter of 4150. Second picture is the chimney casting and ejector ring which I machined in my lunchtimes when I worked at Bridgnorth. Last picture is some of the team after we lifted the loco to check the state of the chassis as part of the overhaul.



2005



2018



2021

### Taking the Accountant out of an Engineer – Simon B

Back in the struggling days at Bewdley, when the loco was in many bits under the tent, John Whitcomb asked me if I would have a go at making the replacement sandpipes, 2 for the front of the loco and 2 at the rear. The old ones being too mangled and corroded to salvage. John (bless him), being an accountant and not an engineer, told me he had cut the new pipes to the exact length, thinking he was being helpful and saving steel and in turn money. Aaaagghhh, what John didn't realise was the pipes needed to have excess length for the pipe bending device to manipulate the bends properly. Fortunately, the front pipes were longer than the rear, so we only binned two of the pipes, bending the new rear pipes



using the longer pre-cut front ones, then using the stock pipe cut to sufficient length to bend up the 2 new front pipes. These were then trimmed to length, mounting flanges marked for positioning and welded on. Job done.



John was delighted with our progress, then suggested we take on some pipework from the Bunker tank to the water valves. This is when we found that the frame stretcher it was bolted to was badly corroded and worse still, badly distorted. This stopped the project in its infancy while a new frame stretcher had to be made and fitted. But that is another time-consuming story. The old one had to be cleaned up in order for it to be used as an accurate pattern.

### **No gain without pain - Kevin S**

My involvement with the restoration of 4150 happened as a result of a chance meeting between myself and members of the then working team at Bewdley in 2017. I had been a member and shareholder of the railway for many years and didn't need much persuading to get involved hands-on with a project such as getting 4150 back in steam.

I soon realised that the group of working members are a very friendly bunch of like-minded guys and we have become good friends whilst we have been working together to solve sometimes very difficult problems that arise while putting back together what is essentially a very old and very large lump of metal.

During this time I have learnt a lot about steam engines from the knowledgeable people that we have in the group, and have had the chance to get involved with some things that most people never get to do. The highlight of which is probably the re-tubing of the boiler which proved to be very hard work indeed and left us admiring the guys at Swindon for whom this was a daily task.

Attached are a couple of photographs of this, one of which is of a very large blister that I had on my soft skinned office



Belling over the tube ends

hands from my inexperienced use of the air gun while belling over the ends of the tubes!

As time has gone by the restoration has progressed to the point where we are very close to completing the project and it's a privilege for me to be involved at this time, we are all looking forward to the time in hopefully the not too distant future when 4150 is steaming along the SVR for the first time since the 1950's.



A half-crown sized blister

## Painting a side tank – David M

I admit to not being much involved in the recent restoration of our loco since its transfer to Bridgnorth in April 2021. Apart from Autumn/Winter of 2021/22, when I helped with the scraping and painting of the driving wheels and sprucing up the inside frames and motion parts using the correct Venetian red colour, I have done little since until recently.

This is not through laziness or lack of interest but because I am so heavily involved with carriage restoration projects at Bewdley where I have worked since 1968. When working at Bridgnorth I feel like a bit of an alien.

However, more recently, I was called on to complete the painting of the driver's side tank following the riveting and welding. The tank completion was considered to be urgent as it was needed to be installed temporarily back on the loco to allow other work to proceed. I agreed to do the job and made two consecutive Friday/Saturday visits in November 2024.



The tank had been stripped to bare metal but most of the back face that sits tight to the boiler had already been painted in chassis black. Working in the Boiler Shop seemed strange, particularly on my first Friday visit when riveting was taking place on 82045's boiler and so ear defenders were a necessity.

Following initial preparation, rust inhibitor was applied which dried fairly rapidly and then one coat of grey anti-corrosive primer. This was to the front face and return ends, part back face that sits within the cab and the tank top and fittings. Next day a second coat of primer was quickly applied and I was able to return to Bewdley by afternoon.

On the following Monday a first coat of green undercoat was applied to all these surfaces by Alex Robinson, one of the Paint Shop volunteers. I visited again on Friday to apply a second green undercoat including the top in the correct black undercoat which I had brought with me from Bewdley. Next day I started by carefully flattening down the undercoats before applying a 50/50 mix of undercoat/finish paint to the appropriate surfaces. Quite a long day's work as care was needed to prepare and remove any sags in the finish, particularly around all those rivets. A good finish now will pay dividends for when the final paint job is done.

The tank remained in the Boiler Shop a bit longer than expected due to unfortunate workforce issues but was eventually lifted onto the loco on the last working day of the year, to everyone's relief.

The livery, as chosen by ballot, is to be the Hawksworth era one as carried by 4150 when new in 1947. This is plain green lettered GWR. Other BR liveries may follow in the future.





## Early days of fundraising. - Pete Maddicks.

Way back in the early days of the fund we had to raise the money to buy the loco from Woodham's scrapyards in Barry, South Wales and move her to Parkend on the Dean Forest Railway. It is difficult to believe now but in 1973 the asking price of a GWR large Prairie was £2750.00, I cannot remember how much it was to move her but to give you some idea of how prices have changed the cab windows cost the same as the complete loco did!

The first thing to do was to ask for people to buy shares, so we had made a start, but still had an awfully long way to go!

Over the next few years almost every weekend during the summer Alan Gurner, Dave Hall, and myself attended traction engine rallies all over the country, personally I have not attended a traction engine event since! We also covered some railway events like the Rainhill Trials and we would have been at Swindon in 1985 had it not been cancelled. Now here is a question for you? How many penny chews do you need to sell to buy a steam locomotive? Well the answer is 550,000! In the end we managed to raise the money, some shares, donations, sales, and loans.

As time went on more people joined the sales team, Ron Jefferies, Eric Maddicks, Mary Maddicks, Rod Mackay, Mike Harris, Carol Jones, and more, but not all at the same time. I apologise if I have missed you out, but it was a long time ago.

It was hard work to run a sales stand, usually a very early start, the first job being a visit, on the Friday evening, to the wholesalers, then early on the Saturday morning we would load the cars. This was followed by a long drive, once on site we would set up the stand. You then spent all day on your feet before taking everything down, driving home and putting it all away. If we had a good day we might take £50, so that might put £20 in the bank! That does not sound a lot, but back in those days for a 56 hour week as an apprentice electrician I was earning £25.00

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