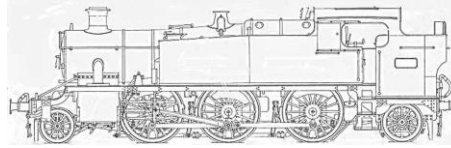


The 4150 Fund 2019 Newsletter



Trustees of The 4150 Fund

At last year's AGM we were asked if a face could be attributed to the name to each of the Trustees, in other words, who are we? So we start this Newsletter with an introduction of the three Trustees:



The Chairman – Peter Maddicks: - As many of you may know The 4150 Fund was first set up in 1972, I was then at the tender age of just 17 !!! and become involved from the very beginning. In the early 1980s I was elected Chairman for the first time, but by the late 80s I relinquished the post owing to family and business commitments. I have been involved on the SVR as a volunteer since 1975 and when Peter Willoughby came up with the idea of reenergising the Fund I was asked to put myself up for position of Chairman which brings me full circle. Surprising what a quick nod of the head can lead to.

The Secretary – Peter Willoughby: - Like many who relocate near the SVR I became a volunteer and started work in the C&W at Bewdley in 2004. Having settled into a life of semi-retirement I went in search of a new challenge. It was suggested that 4150 tucked away behind the paint shop was in need of some TLC and at first sight she was looking a little sorry for herself. On returning home I turned to the internet to see what a Large Prairie looked like, the rest they say is history. It is fantastic to see so many people devoted to preserving our wonderful heritage and to be a part of it.



The Treasurer – John Whitcomb: - I started working as a volunteer on the Severn Valley way back in the 1960s, working for a number of years on carriage restoration. Having noticed how dirty the carriage windows were getting, I ended up cleaning them myself at Kidderminster for a decade or two until I got mechanised by the carriage washing plant! After getting involved with the painting of 7802 in the 1990s, I was roped in as Treasurer of the Erlestoke Manor Fund, then ten years ago I got similarly roped in as Treasurer of The 4150 Fund – I have to be very careful to keep the two strictly separate! Like all of us, I'm a great admirer of GWR Large Prairies, having seen them in action at Snow Hill in the 60s, and I can't wait to see our own 4150 back in steam.

Chairman's Report

Well, it is that time of year again and welcome to the 2019 4150 Fund Newsletter, things have moved on rather rapidly this year. First, we must discuss the boiler, which moved into the boiler shop on the 30th October, and work started straight away, but we are now working on the principle of volunteers carrying out much of the work, under the guidance of Phil Davidson, a full time Boilersmith who will carry out any work that requires specialist skills. Work is also progressing well on the loco at Bewdley, a full update on all progress will be given in the engineering report.

The recent SVRA raffle was a great success, raising over £24,500 before expenses, so a fantastic result and I would like to thank all those Shareholders who supported it. We have not been spending much money this year, but that is about to change now the boiler is in the shop. John will give you a full update on finances of the fund in his report.

We have a great group of people working on the loco, the skill set is very high among the team of 14 plus regulars, but we are short of skilled machinists, so if you are a machinist you would be most welcome to join our happy band. Whatever your skill level you are still welcome to get involved, we will always find you a job and there is always a good supply of tea, biscuits and friendly banter.

With regard to the running of the loco on the railway, I can confirm 4150 will run on a commercial agreement. This means we need to set-up a new owning body to manage the loco once completed. We are fortunate to have a very capable committee member to oversee this. I would also like to thank my committee for all their hard work in both administration and on the loco. I must also express my thanks to all the great people in the team currently working on the loco, you are doing a fantastic job. I would like to extend my thanks and appreciation to all of you for continuing to support The Fund,

I hope to see as many of you as can make it to the AGM at 2.00 pm on Saturday 23rd February 2019 at Kidderminster Railway Museum.

Secretary's Report

Since 2008 the Fund has operated according to a simple but very democratic constitution set up basically for the fund raising and restoration of our locomotive. That constitution has served us very well, both in regard to our fund-raising and restoration work. Our principle of one shareholder, one vote, the power to appoint or remove trustees and the holding an AGM has been envied by other groups. From time to time our members have asked the Trustees to consider becoming a charity when the time was right; now the time is right.

Since 2014 it is possible for organisations like ours to become a "Charitable Community Benefit Society". This type of benefit society has now had time to bed in and a number of locomotive groups both large and small have already taken the opportunity to become such.

The Trustees and Committee having taken advice unanimously support the change to a Charitable Community Benefit Society, the advantages are legion.

- The ability to claim gift aid on donations from qualifying UK tax payers
- Relief from corporation tax
- Relief from inheritance tax to a donor's estate
- One member, one vote in perpetuity
- Members may nominate a person to whom any shares which that Member holds may be transferred on death
- Certainty our locomotive can never fall into private hands known as an asset lock
- Shelter for Trustees and Shareholders from unlimited liability
- Your £1 shares will immediately become £1 shares in the Charitable Community Benefit Company
- All your rights under the current constitution would be protected and others added
- Regulated by the Financial Conduct Authority to ensure fair play
- Charitable status as an "exempt charity" such that we would not be involved with the Charity Commission

Included in this Newsletter is a voting card so your views on this matter can be sought by a referendum before any decision is taken. The Committee believe it is clearly in the interest of The 4150 Fund to register.

If the proposal is accepted this is how we intend to proceed. The document required by the Financial Conduct Authority to register as a CCBS is about 20 pages long. Creating one from scratch would be both time consuming and expensive, and even then it may not be acceptable. The FCA have a list of 24 sponsoring bodies, these organisations each have a set of rules which the FCA accept as a model. This allows us to choose an approved model that is closest to our needs and with legal guidance incorporate it into our constitution. We are fortunate to have a committee member who has a great deal of experience in these matters. Model rules can be used by groups who wish to register as a new society or existing societies who wish to register an amendment to the model. The process of registering a new society using model rules simplifies the registration process. Any society wishing to use a set of model rules that have been formally accepted by the FCA can have confidence that it covers all matters as required by the 2014 Act.

Although a 20 page document may appear daunting most of it formalises common sense rules and promotes good practice currently adhered to by the group, and it will also underpin the Fund's charitable status. A draft of the amended model rules is available on request by email.

There is also a lot of information available on line and on the FCA Website outlining the advantages of becoming a Charitable Community Benefit Society, but if you have any concerns or questions please contact me. pww1946@gmail.com or Telephone 01562 720875.

A charitable community benefit society cannot register as a charity with the Charity Commission. Instead it must apply as other groups have done to HMRC to be recognised as an exempt charity for tax purposes. Again, we are fortunate enough to have a Treasurer with experience in this field.

The referendum result will be decided by a two-thirds majority of votes properly cast by Shareholders. Closing date by post will be Friday 22nd February 2019 or by hand at the AGM venue to the Secretary before 13.45 on Saturday 23rd February 2019. The result will be announced at the AGM.

The 4150 Fund Privacy Notice

As a not for profit organisation the Fund needs to be compliant with the General Data Protection Regulation under the 2018 Act but does not have to register.

As a Shareholder of the Fund the membership database includes your name, address and where applicable your email address. The database can only be accessed by the Trustees, it is for the sole purpose of Fund administration and is not shared with any third party. If you leave the Fund your name and details will be removed.

Please inform the Secretary by email or letter if at any time you wish: -

- For your details to be removed
- Not receive the Newsletter
- Not receive email updates
- Update and/or review your details, especially postal and email address

pww1946@gmail.com or 22 Broomfield Road Kidderminster DY11 5PB

Check your address label, if we have used an initial and not your first name it is because we do not have it, please let me know as it would be nice to update our records. Also, only if there is an (e) after your name do we have a current email address for you. Email is a cheap and easy way of sending updates, the address does not have to be your own and could belong to a family member or friend.

Shareholder Trip

Shareholders' and Friends' events

Evening Social Special—Saturday 11th May 2019

Once again, we intend to run our evening special train which has proved very popular and enjoyable. We include 8 LNER Teak coaches and provide suitable liquid refreshments (thanks in part to our shareholders and supporters at Bewdley Brewery). Such has been the success of this pleasant and enjoyable evening that we are repeating it for the fourth year running. It will depart from Kidderminster at **6.30 - (18.30)** for a leisurely run up the valley with a short break at Bridgnorth for a visit to the Railwayman's Arms, or for the more energetic a quick walk to and from the local chip shop. We will then run back to Kidderminster by 10.30 in time to make connections back to Stourbridge and to Birmingham. The cost of the tickets has been kept at £15 per head, with 8 coaches there will be plenty of room for friends and family and their friends and family - all are welcome.

Bookings and tickets can be obtained in the usual way from the team at the engine or email Dave McFall at davidmcfall@blueyonder.co.uk. Also from Dave Adams via the Erlestoke Manor fund shop at Bewdley, tickets will also be available on the night from the table on the platform (not from the SVR Ticket Office.)

Boiler Steel Stay Removal – Peter Dodson

I have been working on 4150 at Bewdley for over 2 years, a relative newcomer. My involvement has been helping with all things locomotive, that was until the boiler was removed from the frames in March last year. I then got involved with the boiler.

The first task in removing the steel stays was to grind off the stay heads which takes time, but disc cutting is easier and considerably quicker. However, you need to be very careful as damage can occur (which is repairable but is still evident at the moment, working in poor light was my excuse). You become more proficient as time goes on and you get plenty of practice. Even with disc cutting you still have to grind the head off to find the centre of the stay.

Having centre punched each stay the next stage was to drill a pilot hole, some were drilled out when it was under cover at Bewdley. Repeating this over 500 times took time. You then need to drill them out to almost the tapping size $\frac{1}{2}$ " (13mm) to a depth of $\frac{3}{4}$ " (20mm). The boiler was not level on the wagon, so you had to make allowances for angles and the stays fitted on curves. Those involved in this exercise included Tony and Charles.

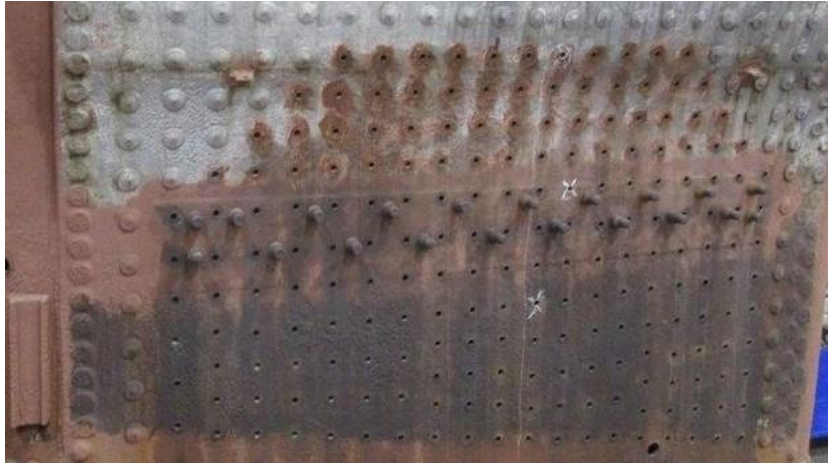
As you read in the Chairman's Report the boiler entered the Boilershop on Tuesday, 30th October. Work started that afternoon and first involved burning out the stays on the inside of the firebox to just clear of the inner copper plate thickness, a fantastic job carried out by Simon Brooks. The easy but very noisy bit is using a pneumatic hammer to break off the stays.



Work underway in the Boilershop

This is where you learn how accurate you are with the drilling of the stays, if the drilling is spot on in the centre, the stay breaks off and drops away into the water space. If you are not, then it hangs on and will need to be removed when the next stage is completed. To date there are just 4 stays to be removed this way out of a total of 586, not a great number missed the centre.

The stays are screwed into the inner and outer plates of the firebox. I thought that the threaded remains of the stays in the outer plate could be removed by using a powered extractor and they would be unscrewed. I assumed wrong ! Unfortunately, the remains of the stay need to be nicked with a gas burner and then the remains carefully chiselled out. Practice makes perfect and you quickly become more proficient, but it takes time and for those of us not accustomed to using a 2lb lump hammer you quickly learn to not miss the chisel head and take a break when you get tired. When this task is complete, we will turn our attention to the copper stays. Those involved at Bridgnorth include Phil Davidson, Simon Brooks, Peter Willoughby, Dave Mcfall and myself.



One side of the outer firebox plate showing 208 drilled out stays



1 of 586 steel stays showing corrosion and the scars of burning out

Next, once all the remaining bits of steel stays have finally been shelled out, the holes will be inspected for damage and any errors may have to be welded up. Once the sizes have been determined as to which diameter the new stays will be the holes will be reamed out to size using an air driven motor. The reamer is about 18 inches long so it can pass through from the outer steel to the inner copper sheet in one process. Then the length of the new stays will be determined by

using a stepped rule, each hole being length marked accordingly. The stays will be made inhouse at Bridgnorth on the CNC lathe. When they are ready the holes will be tapped one at a time and the relevant stay screwed in, again the tap is about 18 inches long and wound through with the air motor. The stays are then pegged with a small punch to keep them in position prior to caulking on the outside and in the firebox, stay nuts are screwed on to stop the stays being affected by the fire.



Sample of a new steel stay, each one measured and machined to fit

ENGINEERING REPORT - John Whitcomb

The main event of 2018 was, of course, the move of our boiler up to Bridgnorth, and its entry into the boiler shop on October 30th. Peter Dodson's article in this newsletter describes in detail the work done to date on removing the steel stays, and in addition, Dave McFall and Jimmy Norris bravely volunteered to get inside the boiler barrel and use a needle gun to de-scale the interior, a very unpleasant job which involves climbing down through the narrow safety valve aperture and then down between the longitudinal stays into the area from which the tubes have been removed. In truth, very few of us could actually physically get in there, never mind put up with the claustrophobia! The good news is that the inside of the barrel is apparently in remarkably good condition (I haven't been in to check!), and removal of the scale will enable the boiler inspector to give a definitive view on the thickness of the barrel in those areas where there is some inevitable external corrosion. We would like to thank the Bewdley Wagon Department and Paddy Goss, the owner, for the use of Great Western Sleeper Wagon 40554 to transport the boiler to Bridgnorth, and for allowing us to work on the boiler on the wagon during the summer before the move north. We inevitably created a fair amount of swarf and grinding dust, though we did our best to minimise it, and we have undertaken to paint the affected parts of the wagon once the weather improves.

That left just the chassis at Bewdley, but now with the new bunker and side-tanks and the cab roof all in place on the frames, having been lifted into position in 2017 by the road crane which did the boiler lift. This means we have been able to get on with fitting a lot of the cab fittings and levers, along with their various linkages. This is an important task in that it enables us to confirm that we've actually got everything we'll need when the boiler is completed and we get to the final fitting out stage, and also to check that everything lines up in terms of fit and clearance. A number of items, particularly sections of cladding, which have puzzled us for years as to where they might go, suddenly become the things which fill an obvious gap! Several fittings in the cab are mounted on the sidetanks, including the reverser quadrant, the handbrake pedestal, the sanding levers, the coal watering cock, the ATC battery box, the cab doorstop angles and the sliding cab side window shutters, all of which have had to have holes drilled in the tanks to accommodate and correctly locate them. Having the cab ends of the old tanks still at Bewdley for reference (the front ends were despatched to a scrapyards some years ago) has been very helpful, requiring many trips up and down the yard with a tape measure and notebook. Likewise on the bunker we've been able to mount the cab doors, driver's and fireman's seats, tool boxes, and the water valve handles and operating rods.

The cab roof is original, and generally in very good condition, so in most cases the holes in it are already drilled, and just need several thicknesses of paint removing to enable a bolt to fit. An exception was the condensing coil which is brand new (the old one having no doubt disappeared at Barry), and has three fixings into the cab roof. We could get any one of these to line up, but never the other two, so rather inevitably two new holes had to be drilled, the two old ones to be welded up when the roof is removed at Bridgnorth. With the sidetanks projecting well back into the cab, space is at a premium on GWR Prairie Tanks, such that even the coal pick is located in the roof, with its own specially designed securing brackets to hopefully prevent it landing on the head of the fireman. Document holders, newly made during the year, and whistle guides complete the roof fittings, though there remains a set of holes on the driver's side for which no-one has yet been able to establish a reason. The visit of 4144 to the SVR for the Spring Gala should provide some clues, and we are looking forward to crawling all over it armed with tape measures and cameras! The one problem with the cab roof itself was that all four of the bottom corners of the side sheets were badly corroded, partly no doubt a result of it sitting on damp wooden packing for a number of years. We could have patched these up with filler, but decided to bite the bullet and cut out the bottom four inches or so and weld in new replacements from 5mm sheet. We were then able to re-fit the 10 sections of riveted beading which surround the cab side window and match up with the beading along the top of the tanks and the bunker. All of these need to merge seamlessly with the next section, which is a most demanding task involving much use of templates for getting the rivet holes drilled accurately.

The linkage for the front sanders caused a lot of headscratching, as the long rod to the front of the loco was in three sections, none of which were labelled as to their order, which way round they were, and which way up they were. A large number of permutations were possible, and it took a complete morning of trial and error before we sorted it all out. Labelling is very important! The refurbished cranks for the cylinder drain cock linkage also caused some puzzlement, as they were permanently fouling the rear axlebox horn tie. A small modification in the machine shop sorted that one out.

Underneath the cab floor, the vacuum cylinder, a heavy item which had been removed by the road crane at the time of the boiler lift, was taken to Bridgnorth in the Chairman's transit van, and overhauled by a volunteer who specialises in such

work and to whom we are most grateful. A rather expensive new IR (India Rubber) band was required, but otherwise the cylinder is in excellent condition and ready to be re-installed between the frames. Also overhauled was the somewhat less heavy vacuum reservoir which was sent away for shotblasting inside and out and has been painted and replaced in position directly under the new steel cab floor sheets. New heavy angles which support the cab floor have had to be fabricated from scratch, as they have to be fitted to the 'joggle' in the frames where they narrow to accommodate the rear radial truck. 'S'-shaped angle is just not available in the shops! These have been drilled and will be riveted in position when the frames are at Bridgnorth. With all of these in place, we are in a position to start constructing the timber cab floor, consisting of two layers of planks laid laterally and longitudinally, with an additional raised wooden platform on the driver's side for visibility through the cab windows and ease of operating the reversing lever. Ever mindful of driver comfort, Swindon even positioned the driver's seat a few inches higher than the fireman's. Or maybe that was to emphasise relative status!

In the bunker, the lower coal plates have been welded in place, and the water space underneath given several coats of paint ready for the upper coal plate to be similarly welded onto its supporting angle. Once that's welded in, the water space becomes a bit of a no-go area, somewhat akin to the inside of the boiler and if anything, even more claustrophobic. There is an access hatch, but I expect we'll keep its use to a minimum. Pipes have also been on the agenda, and we are attempting to master the art of pipe-bending – not as easy as it might sound. The first ones we made were the sand delivery pipes, the old ones being very bent, battered and rusted through in places. With brand new pipe and new flanges, they now look very presentable and should last for many years. Flushed with success, we moved on to the injector delivery pipes, which take water at high pressure up diagonally behind the cab steps, then forward along the underside of the tanks before joining copper pipes which go up through the tanks to the clacks and then into the boiler. These are high-spec seamless steel pipes which have to go through various clamps and narrow cut-outs in the brackets which support the sidetanks – difficult to achieve accurately when there are several bends in a long length of pipe. The new flanges were tack-welded in place initially, then fully welded when the next section along was considered acceptable. Most of the copper pipework will have to wait until the boiler is back in position, but we should be able to tackle the ones from the bunker to the water valves and then to the injectors, and also those from the delivery pipes to the coal watering cock.

At the front of the loco, the cladding round the right hand cylinder and valves was completed during the summer, and our new cylinder drain cocks were trial-fitted and bedded in, with modifications made to the under-cylinder cladding to accommodate the pipe to the central drain cock from the valve chest. With the front of the loco outside the confines of the 'Alstom' tunnel, progress on the left hand side was suspended during the winter to avoid having to lie in the mud and get dripped on. Oh for a nice warm workshop! Looking ahead into 2019, we need to complete as much work on the chassis as can be achieved at Bewdley, in readiness for the move to Bridgnorth for the remaining riveting work and ultimately reuniting with the overhauled boiler. For those with internet access (hopefully nearly all of you, by one means or another), photos of much of the work described can be seen in the News section of our website, www.4150.org.uk.

A previous newsletter mentioned a record on the Locomotive History Sheet of 4150 undergoing a repair at Old Oak Common workshops in 1963, an unlikely eventuality for a Severn Tunnel Junction engine. It brought to mind images of 4150 sitting triumphantly at the buffer stops in Paddington having arrived at the head of the Capitals United Express or the Red Dragon after deputising for a failed Castle or Britannia (or more likely a diesel). The truth might be more prosaic however, as it's been suggested that 4150 and another Large Prairie were sent on short-term temporary loan to a London Division shed, maybe to make up for a shortage of 61xx's. If anyone has any further information on this, we would be very pleased to hear from you.

I need to end with an apology and a correction – in last year's newsletter I said that our new 10mm injector would be fitted on the fireman's side of the loco, and the 8mm on the driver's side. In fact, they're the other way round, the logic being that it's sometimes convenient to leave the fireman's injector on for a while when the engine is working hard and needing to be fired frequently. That being the case, a more modest flow of water fits the bill. The larger driver's side injector tends to be reserved for less frequent but more rapid input of water to the boiler when circumstances require – or so I'm told by those with footplate experience. A bad case of fake news I'm afraid! If funds permit, and if a bulk order is organised (as was the case for the 10mm injector), we would be keen on buying two new sets of internal components (cones) for the 8mm injector. Having funds available when such opportunities arise is essential, which is a good excuse for encouraging everyone to buy more shares if you possibly can! Many thanks.

30th November 1948 – Dave Massey

In our 2016 newsletter we reported the brief details of the rail accident at Lapworth where 4150 was rammed head - on by a Paddington - Birkenhead express hauled by 5022 Wigmore Castle on this foggy November day. The foggy conditions were nationwide and the Lapworth accident was only one of three similar collisions on this fateful day. The other two are worthy of consideration, particularly the third and most serious one.

The first incident was on the Southern Region near Clapham Junction where an electric train from Guildford ran into a steam hauled train from Weymouth. There were no serious injuries, but significant disruption was caused to the busy Waterloo services.

At about the same time as the Lapworth accident a far more serious one was unfolding on the London Midland Region in the Manchester area. In the industrial North West smoke from factory chimneys and domestic fires had combined with the fog to produce a dense smog. By the early evening most public transport had been halted but the railways continued to operate with a special fog timetable. The two trains involved in the accident were both much delayed combined services.

A combined 12 coach Crewe and Hazel Grove train left Manchester London Road (now Piccadilly) at 6:52pm hauled by Fowler tank no. 2354 and 'Black Five' no. 5143 and was followed 13 minutes later by a combined 9 coach semi-fast and local train to Buxton hauled by two Fowler tanks nos. 2367 and 42370.

Trains were being worked cautiously within block sections with Fogmen using detonators employed at some Distant Signals to relay signalling information and generally trains halting at Home Signals to allow confirmation of signal status. In some cases the Fireman would have to climb the signal ladder to observe this at close quarters, so bad was the visibility. Having passed through Heaton Norris station, 5.5 miles from Manchester, the Crewe/Hazel Grove train proceeded to the Stockport no. 2 Home Signal on the high viaduct outside Stockport Edgeley station and was held there awaiting clearance of a platform road. Meanwhile the Buxton train had approached Heaton Norris and was brought to a stand at the Home Signal. As it was not due to stop at Heaton Norris station it should have remained there until the short section ahead was clear but the Signaller decided to (wrongly) apply a special local instruction and move the train forward to his Starter Signal in order to clear a junction to the rear of the train. In doing so this placed the train in the platform where it had not been booked to stop. Many passengers decided to alight here so distracting and delaying the Guard who should have immediately gone to the signalbox to carry out Rule 55 as there was no track circuiting here.

A young Porter was assisting the Guard with the unexpected platform duties and after closing carriage doors went towards the end of the platform and shouted forward to the engine crews the instruction "OK when you are ready". Unfortunately, the Drivers heard the shout as "Right away driver" as although unseen believed it had come from the Guard on his return from the signalbox. One of the Drivers also claimed afterwards that a green light had been shown but that may have been the effect of the smog distorting the white aspect lamp held by the Porter.

Thus the train set off, passing the Starter Signal still at danger, and headed on to the viaduct still occupied by the first train and towards inevitable disaster. Although only travelling slowly the force of a 425 ton train hitting an immobile 550 ton train crushed and telescoped the rear three carriages of the Crewe train with the steel underframe of one shearing through the body of the next coach with tragic consequences.

Five passengers were killed and many more injured and one can only imagine the difficulties the emergency services had in dealing with this situation on a high viaduct in dense smog.

For a full description of all the events leading to this accident including signalling and infrastructure details, rules and regulations that should have applied and many more facts and figures I recommend a booklet written and published in 2010 by Kevin Dranfield titled 'Stockport Train Crash, Viaduct Disaster of 1948'.