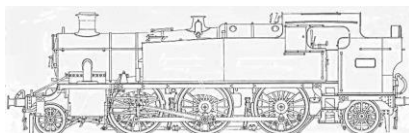


The 4150 Fund 2024 Newsletter CBS No. 8179



4150 Cab Fittings coming together very nicely.

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

Chairman:- Peter Maddicks (Trustee)

Secretary:- Peter Willoughby (Trustee)

Treasurer:- Sylvia Hammond

Trustees:-

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

The Fund's AGM this year will be held at the Kidderminster Railway Museum, in the old nursery building at 14.00hrs. on Saturday 7th. September 2024.

Front Cover - Cab Fittings

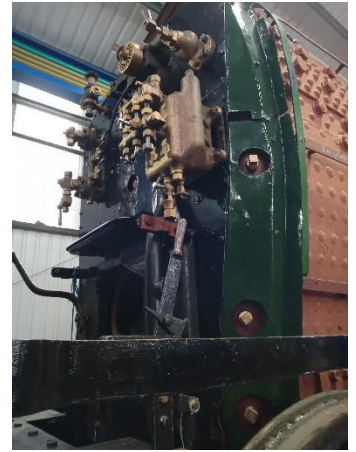
It is time to get all the cab fittings ready to be fitted, the first thing we did was to get them out of storage and temporarily put them on the back head to see what we have and what needs to be done..

Once those we had were in place we could establish what was missing and what work is required to complete them.

It has been suggested that all the valves which are the cone type with metal-to-metal seals should be replaced with Klinger packing type which are more reliable and require far less maintenance.

Work has now started on completing all the fitting which then can be individually hydraulically tested and are then ready to fit as soon as the boiler has been tested.

We are in a very good position regarding the locomotive fittings as we have been acquiring them over many years as they became available. We now only require the smaller components which need to be manufactured, this work is in hand and will soon be another box ticked.



Chairman's Report – Peter Maddicks

It is that time of year for me to sit down and write my annual report and the first thing I have to pass on is the sad death of Graham Stevens, many of you will know him for running the EMF sales coach at Bewdley, but he helped us by selling on donated model railway and transport related equipment on eBay. Thank you Graham for all of your help. On behalf of the Fund I would like to pass on our sincere sympathy to Jan and all the family.

Over the last year we have been busy working on the loco most Saturdays and Mondays with the occasional extra days in the week. There have been two main areas we have been working on, the smoke box, all the bits that go in and on it. The other is the side tanks. No work has been carried out on the boiler this year as we want to get the maximum out of the boiler ticket. I would like to put on record my thanks to all of the team who have been working hard over the last year. Tony Howards engineering report will bring you up to date with that.

On the less glamorous side, administration, your committee has been working hard to make sure that the future of the Fund is secure, as well as all the day to day activities that keep the Fund going. Thanks to all of my fellow trustees for all their hard work, without it the fun bit of working on the locomotive would not be possible.

On behalf of all the trustees I would like to thank Stephen Goodchild for all of his work as the Fund Treasurer over the last few years, Steve is standing down as from the end of the 2023/4 financial year.

We have had a volunteer offer to take over from then, Sylvia Hammond, who has a lot of experience in this type of work. We would like to thank Sylvia for taking up this essential, and important job.

Paul Bennett has been doing an excellent job in keeping the website up to date. I think it is most important that we keep you, our shareholders and potential new ones fully informed on what is going on. I would like to thank Tony Howard for writing the monthly updates, leaving me the fun job of doing the introduction and the photographs.

Later in this newsletter you will find an advertisement for railway batteries for heritage diesels and coaches. The Fund is the agent for EnerSys Batteries for the heritage movement, which can trace its ancestry back to the days of Crompton Parkinson, so if you require any help with your battery needs please take a look at the advert.

And finally a huge thank you, to you, the people who put your hands in your pockets and make what we do possible. Thank you all.

I look forward to meeting some of you at the AGM in September

Secretary's Report – Peter Willoughby

Firstly the time and date of this year's AGM is Saturday September 7th at 2.00pm. It will 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 12 months. Thanks to you all for this vital funding, it really does make a difference.

Apologies for the Newsletter being a little later than usually we were awaiting clarification of times for our Evening Steam Charter on the 27th July. This is social evening with the chance to meet fellow shareholders and some of the working members see page 9 for further details.

After 5 years our Treasurer Stephen Goodchild has decided to step down, on behalf of the Fund I would like to thank Steve for his commitment and wish him well for the future. Sylvia Hammond who is well qualified for the position has agreed to fill this important post and on behalf of the Fund I would like to extend my appreciation and look forward to working with her.

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 We are always in need of articles of general interest for the Newsletter, they do not have to be specifically 4150 or SVR related.

You would have read in the Chairmans report of the sad passing of Graham Stephens our "money from nothing" guru. However his wife Jan has kindly agreed to continue his legacy so if you have any surplus saleable transport related items that the Fund can sell on please get in touch.

This 4150 timeline is a short writeup submitted by Peter Maddicks that was to be included in the SVR Spring Steam Gala brochure. It never quite made it but may be of interest to some of our newer members.

In June 1947, 4150 was built at Swindon works and entered traffic. Therefore the locomotive is a genuine Great Western Railway product. She was delivered to Stourbridge Junction shed and put to work mostly on local passenger services to Birmingham, Lapworth, Worcester and probably the Severn Valley Railway. 1948, on November, Tuesday the 30th, a very foggy day, she was running around her train at Lapworth when castle class 5022, Wigmore Castle, on an express, overran a red signal smashing up the front of both locomotives. 1952 to 1963 she was allocated to sheds in the west country, including Weymouth, Taunton, Exeter, and Newton Abbott. 1963, she moved to her last sheds, Severn Tunnel Junction, where she spent her time in the depths of the tunnel, assisting heavy freight trains through. 1965, the locomotive was sold to Woodham Brothers of Barry South Wales. 1973, she was bought by a small group of enthusiasts. 1974, moved to the Dean Forest Railway at Parkend. 1978, locomotive moved to the SVR for restoration to commence. 2007, a new committee was formed and work restarted. Restoration made good progress only possible by a dedicated team from all walks of life. 2025? we never want to give a completion date, but we hope 2025 will see a fire in the box.

Engineering Report – Tony Howard

The first major job in April was to get the vacuum pipe sorted, luckily the loco was over the wheel drop pit so it was easy to work on it. Two ninety-degree elbows were needed and these were welded on to the end of the pipe and flange. The other end of the pipe that fits to the brake valve was not in a good state, so we cut off six inches and welded a new piece in, this modification worked well.

The newly painted smokebox door was lifted into place using the new overhead crane, the Cover case was also fitted. Parts were made for the drop grate operating mechanism and blanking plates for the superheater header in readiness for its hydraulic test.

A start was made on fitting the crinolines back on the boiler and firebox. These were all marked up when they were removed at Bewdley, despite this some head scratching was going on, fortunately we had photos of the crinolines in place. With crinolines all fitted we were able to fit the handrails both sides of the smokebox and clamps were modified for blanking off the superheater header.

The blast pipe was retrieved from the Fruit D and temporarily fitted in the smokebox. The boiler bands that secure the boiler cladding were bought into the shed for painting. The large, curved plate that is fitted to the crinolines and has a large oval hole cut into it for the safety valve was also bought into the shed. This will have to be temporary fitted to check the two crinolines it fits to are in the correct position.

A gasket was made for the blast pipe and it was bolted down. The chimney was brought from safe storage and put by the loco ready for a trial fitting.

We borrowed a fitting from the 82045 group to lift our chimney into place and another fitting borrowed from SVR Engineering to line it up central to the blast pipe. We marked the holes from the inside of the smokebox and marked the position of the chimney onto the smokebox. The chimney was lifted back off and placed onto a pallet on its side ready for centre punching and pilot holes were drilled, again the overhead crane came in very useful.

The 11/16" diameter holes in the new chimney base were drilled and the chimney was lifted back onto the smokebox and bolted down. Seven of the eight bolts fitted perfectly just a little more work required on the last one.

The supporting bar that secures the water tanks at the cab end had new pieces of all-thread welded on.

The bracket that supports the two steam pipes that feed the injectors was eventually found. We had been looking for it since January and last week we decided to make a new one. This was bolted in place along with the heat shield that protects the drivers' legs from the fire.

The chimney was lifted off and placed upside down on a pallet so the blower ring could be fitted. 9/16" diameter holes will have to be drilled into the bottom part of the chimney. The blower ring is a new casting and the fixing holes were already in the casting for fixing to the chimney and the petticoat.



A jig was made to get the centre of the holes. We had a fitting that enabled us to use the battery drill in a vertical position and the pilot drill bit in a horizontal position. Once all the pilot holes were drilled, we drilled the 9/16" holes. The new blower ring fitted perfectly, the petticoat was the original one and was out of shape and required some precision hammering to get it back into its proper shape. The chimney was secured to a pallet ready to be transported off site to have the copper cap fitted.

The left - hand water tank was bought into the Boilershop ready for riveting and welding.

A decision was made about fitting low level water fillers. Drawings were made and all the pipework and fittings were ordered. We needed 3 inches of thread cut on one end of the pipe and 1 inch on the other end. There is a pipe threading machine in the workshop and we had instructions on how to use it. Both pipes were threaded and installed with all the fittings.

The safety valve was fitted along with the bonnet.





Superheater undergoing hydraulic test

The superheater header was prepared for its hydraulic test, it was filled with water and connected to a hand pump. A calibrated pressure gauge was also connected. We pumped the water until the gauge read 300psi. It was passed by the Boilersmith. The next item for hydraulic testing is the regulator box. We had to change the bolts and studs that holds the cover, also the faces needed to be machined to remove some damage. This was done in the machine shop.

We also examined the face that the regulator valve sits on in the box and the regulator valve itself. Both need work carried out on these faces. This work will have to be done by the full-time staff, unfortunately they cannot start on this work until later in the year. Despite this we still managed to get the regulator box hydraulically tested and it passed.

Next item to be hydraulically tested was the copper steam pipes that fit between the regulator box and the superheater header. These pipes were still in when the loco was at Barry and was the first time most of us had seen them, unfortunately they failed the hydraulic test as they were cracked. We did fit these pipes to check they fitted correctly, so a jig could be made to bend the new pipes to the correct profile. The regulator box has now been taken out of the smokebox.

In January, work started on the yard so we couldn't move the loco onto a pit. Despite this, work carried on riveting and welding the left-hand water tank. At the beginning of February all the rivets had been done on the outside of the tank, and a start was made on assembling the back and top of the tank. The only riveting left to do are where the end of the tank is actually in the cab.

The second week in February we did get the loco over the wheel drop pit. We managed to fit the new spring hanger bolts to the radial truck, although further work is required on the forward two. As we will be over the pit for at least two weeks we will try to do as much work as required under the loco, such as fitting the oven door, connecting the flexible hoses to the vacuum retaining valve and progressing with the drop grate operating mechanism. Work is also continuing with fitting the copper cap to the chimney.

We did manage to clamp the hinge of the ashpan door in place and fit the door and the catch that holds it shut. We marked the positions on the ashpan and removed all the parts as the loco was going to be shunted off the pit later in the day.

With the riveting on the left-hand tank all but finished, we fitted the back plates temporarily to the tank to check the bolt holes still lined up, luckily they did. The two top plates were also fitted as well as the large pipe that goes vertically through the tank. The water feed pipe goes through this large pipe to feed water to the boiler. All these plates and the large pipe will be welded on.

The superheater elements were bought out of the storage container in readiness for hydraulic testing. These elements are brand new, but still need testing.

The large pipe that runs vertically through the tanks was refitted and set to the correct position in the reinforcing ring that is welded to the underside of the tank. The top of the tank also has a reinforcing ring that is riveted to the topside. Once it was all in position, we marked the pipe to cut to length. Once cut to length it was replaced, tack welded at the bottom, top plate replaced, all ready to be permanently welded top and bottom.

Unfortunately we have now heard the superheater elements cannot be tested for another six weeks, the space we put them will be needed for other items. So we had to put them back in the storage container. More work was done on the left-hand water tank. There will be a lot of welding to be done once the back plates are bolted back on.

A start was made on making the new stuffing boxes.

This is the only job we can do on the loco, as the wheel drop pit is in use for the essential winter maintenance on the loco's needed for the 2024 running season. Most of the work is going on with the left - hand water tank, and this work is mainly on a Monday. We nevertheless have two or three people working on the stuffing boxes and steel steam pipe.

By the middle of March, the overflow pipe was fitted at the front of the water tank, this pipe drains any water that overflows from filling the tank onto the ground.

The last two weeks in March all the awkward rivets were fitted using a hydraulic ram as a jammer, this worked well. The first of the tank back plates has been bolted on ready to be welded permanently.



Regulator Box passed hydraulic Test

Smokebox Pipework - Dave McFall

The front pipework has proved interesting to say the least! The regulator box is attached directly to the front tube plate. When the regulator is opened steam passes via two 3 1/2 inch copper pipes to the superheater. The superheater sits on two brackets fastened to the smokebox. The super-heated steam then passes down through two steel pipes to the cylinders, it all sounds simple enough.

Bearing in mind all is subject to high steam pressure and as such need to be tested as a failure in service could result in a blow back causing serious injury to the crew. We have now tested both the regulator box and the superheater header to 300 PSI, bearing in mind 200 PSI would be its normal working pressure. (Photo Two)

The steel pipes are now 55 years old, so common sense and good working practice suggests they are replaced with new ones. However, these are non-standard and will need to be built from pre-formed bends inside the smokebox to reduce cost. The benefit of this is that pre-formed joints do not need bending or stretching which would result in thinning of the outer wall of the curves where the plate is stretched.

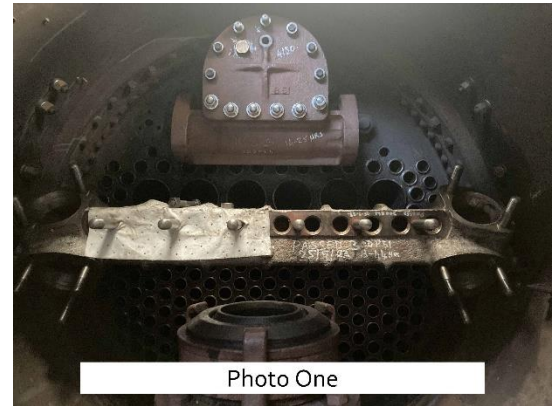


Photo One



Photo Two

This jig allows for the left and right pipes to be made up off site as each are slightly different. (Photos Three &



Photo Four

The two copper pipes were then annealed ready for pressure testing, but it was discovered that both had cracks which did not hold water even before any pressure was applied. So once again it was a case of replacing with new.

The problem we faced was that no one supplies 3 1/2 inch copper pipe to the correct gauge off the shelf anymore. Through the Bridgnorth network we located a company in Coventry that produce the correct specification of pipe which has been ordered. The pipe then needs a complex set of bends in them as can be seen in the attached photograph. Brian H. has created the jig shown which matches the positions of the superheater and regulator box joints. (Photos Three & Four)

The contact who the railway has for this type of work is in north Scotland linked to the distillery industry. We have been helped throughout by the full - time staff, and particularly Will M., who has taken a lead with the copper pipe specification, using his considerable knowledge and previous experience when dealing with the experts.



Photo Three

The Fruit D aka The Fruit T (as in tea)

The Fruit D, a GWR designed BR built goods wagon that serves as our mission control and was donated to the Fund by two of the original Shareholders. In that time it has served as a Storage facility, tool shed, paint shop, workshop, shelter from the elements, planning office and of course tearoom. Yet I am sure many of our members do not even know of its existence which is a shame considering the important part it has played in the restoration of 4150. When the time came for our engine to leave Bewdley and move to Bridgnorth the Fruit D went too and was included in the convoy north as seen in the photograph.



Coupled up with our tool van



Bringing the Fruit D to your attention is well overdue and was prompted by this response by one of our working volunteers.

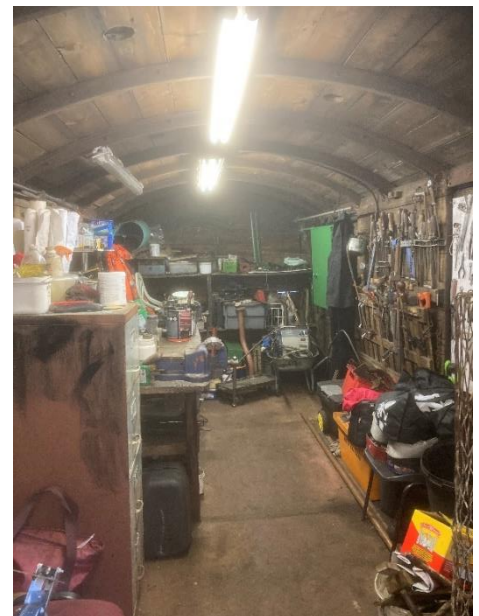
“Some time ago one of the newsletters included profiles of the working members, one thing that was touched on was our light-hearted likes and dislikes about being involved in the 4150 Fund, my like was the tea breaks and the banter, dis-likes the clutter and junk in the Fruit D van. Little did I know my colleague Charles must have had the same underlying niggle festering away beneath the surface regarding all the mess making the carrying out of his tasks even harder.

He has revolutionised the van, throwing away the rubbish, scrapping broken tools (many to choose from), giving away unwanted stuff, filing the drawings in one place, tidying the shelves, put stuff back on the racks and completely clearing the bench, Bob now has room to paint things and hang them up, we can see the other end of the 34 foot van from the door, the floor has been swept and to cap it all, last Monday 8 of us were able to sit in the van for lunch in complete comfort, sitting on chairs, not buckets of coal and empty paint tins.

Bravo Charles, I applaud you!

Best wishes Simon”

The photographs show the Fruit D in Bridgnorth yard and inside 34 feet of usable space.



BATTERIES FOR SALE

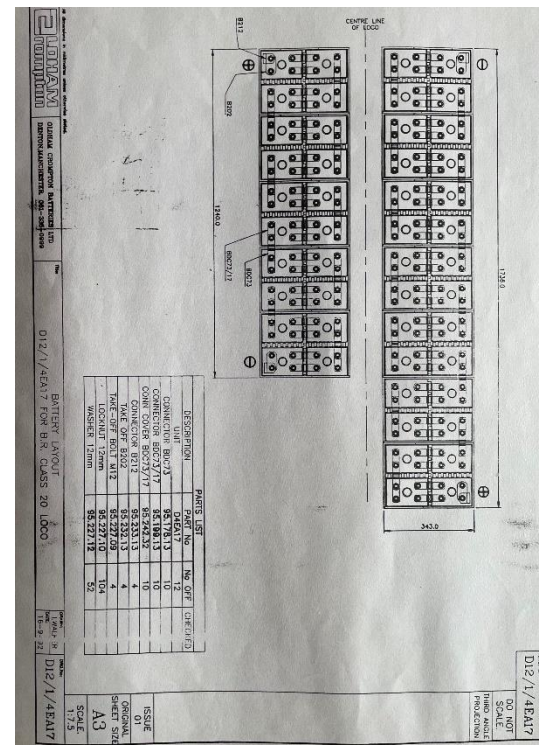
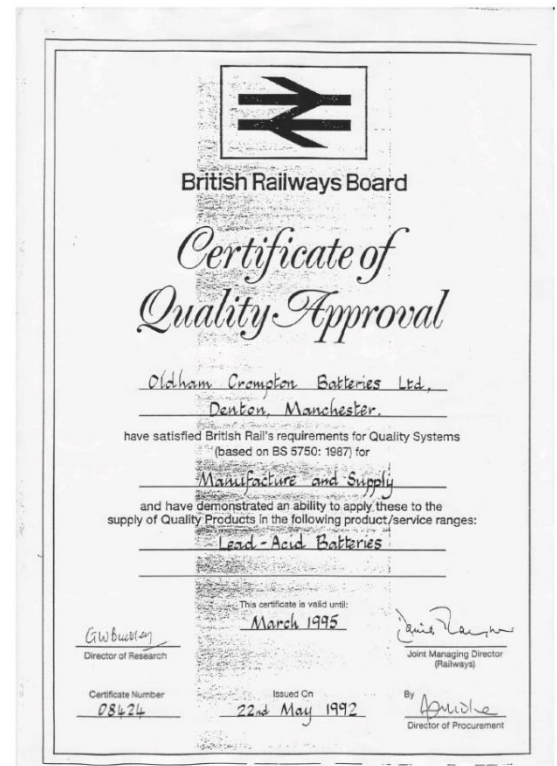
We are pleased to be the agent of
Energys Batteries for full batteries and
kits for heritage diesels and coaches.

Energys can trace its history back to
Crompton Parkinson. We have large
collections of the original BR
drawings, so if you would like a quote
for a complete battery or a
replacement kit, or if we can help you
in any other way please email us at
petermadd59@hotmail.com

Photo One. Copy of the BR certificate
of compliance.

Photo Two. Complete 90v battery for
a Class 08 diesel locomotive.

Photo Three. Layout drawing of a
Class 20 diesel locomotive.



Treasurer's Report – Stephen Goodchild

2023/24 was again a reasonable year financially for the Fund. Income for the year came to £43,968.20.p, down on the previous year. Monthly standing orders added £8,211.80p, thank you to all members who contribute in this way, this is a really valuable resource for the Fund. Gift Aid adds 25% to donations, including standing orders, this year the fund received an additional £2,382.65p from HMRC from Gift Aid. Please be aware if you gift aid you need to be a tax payer. The Fund also received £5,400 from new shares. The Fund made a profit of £4,512.35 from the sale of Heritage Railway batteries.

Work on the Locomotive has progressed steadily this year, resulting in expenditure of £36,832.77.

There was a small excess of £7,135.43 from the Fund's income and expenditure. The work carried out on the Locomotive has resulted in a notional increase of £13,598.39p in the overall value of the Locomotive. This is a testament to all the hard work put in by the Volunteers. The Fund currently has cash on hand of £195,938.71 (As of the end of the 2023/24 financial year) to complete the restoration and future maintenance costs. Whilst this appears to be a substantial sum it is still relatively small for the restoration and ongoing running of a Heritage Locomotive.

Whilst we are nearing the completion of the restoration, SVR are of the view that fees paid to locomotives running on Heritage Railways would not cover the maintenance costs of these locomotives. Hopefully once the Locomotive is running this will act as an advertisement for future fundraising.

I would recommend that the Fund disapply the need for a Qualified Auditor and to continue with a Lay Auditor. This arrangement has worked well for the Fund over the course of many years.

A Date for your Diary

The 4150 Fund Evening Steam Special (with bar)

Saturday 27th July

Departing Kidderminster at **18.30** with a 1 hour 25 minute stop over at Bridgnorth, leaving plenty of time to visit the engine shed which will be open and see for yourself the progress being made on our loco. We will depart Bridgnorth at **21.00** arriving back at Kidderminster at **22.00**
(the train will be stopping at Bewdley)

£15.00 per person

As a Shareholders you can pay on the day and as we are having a steam hauled service train there will be plenty of room if you choose to invite friends and/or family.

Please note:- A £4 car park charge will apply at Kidderminster

The 4150 Fund Share Application
Registered Charitable Community Benefit Society – 8179

I wish to donate £_____ towards the restoration of 4150 or

I hereby apply for _____ one-pound shares (min 25).

I enclose a cheque payable to The 4150 Fund (or use bank transfer using the details below).

The 4150 Fund—Lloyds Bank plc Account No **02332676** Sort Code **30-96-00**

Title _____ **Full Name** _____

Address _____

Post Code _____ **Email** _____

Tick here if you are already a 4150 Fund Shareholder ☐

Share Subscription Scheme:

Why not spread the cost of participating by using the Bank standing Order below, you can make a monthly payment from as little as £4.00.

Bankers order to _____ (Your bank)

Account No _____ Sort Code _____ - _____ - _____

Please pay £ _____ (£4.00 Min) each month Commencing on 01/_____/20_____

until further notice (or until) 01/_____/20_____

Boost your donation by 25p of Gift Aid for every £1 you donate.

GIFT AID DECLARATION:

In order to Gift Aid your donations you must tick the box ☐

I want the Charity to treat all the contributions I make from the date of this Declaration, until I notify you otherwise, as Gift Aid donations.

I am a UK taxpayer and understand that if I pay less income tax and/or capital gains tax in the current tax year than the amount of Gift Aid claimed on all my donations it is my responsibility to pay the difference.

Signature _____ Date _____

giftaid it

Please notify the Fund if you:

- 1) Want to cancel this declaration.
- 2) Change your name or home address.
- 3) No longer pay sufficient tax on your income and/or capital gains to qualify.

Please return this completed form to The 4150 Fund Membership Secretary:-

Peter Willoughby 22 Broomfield Road Kidderminster Worcs. DY11 5PB