

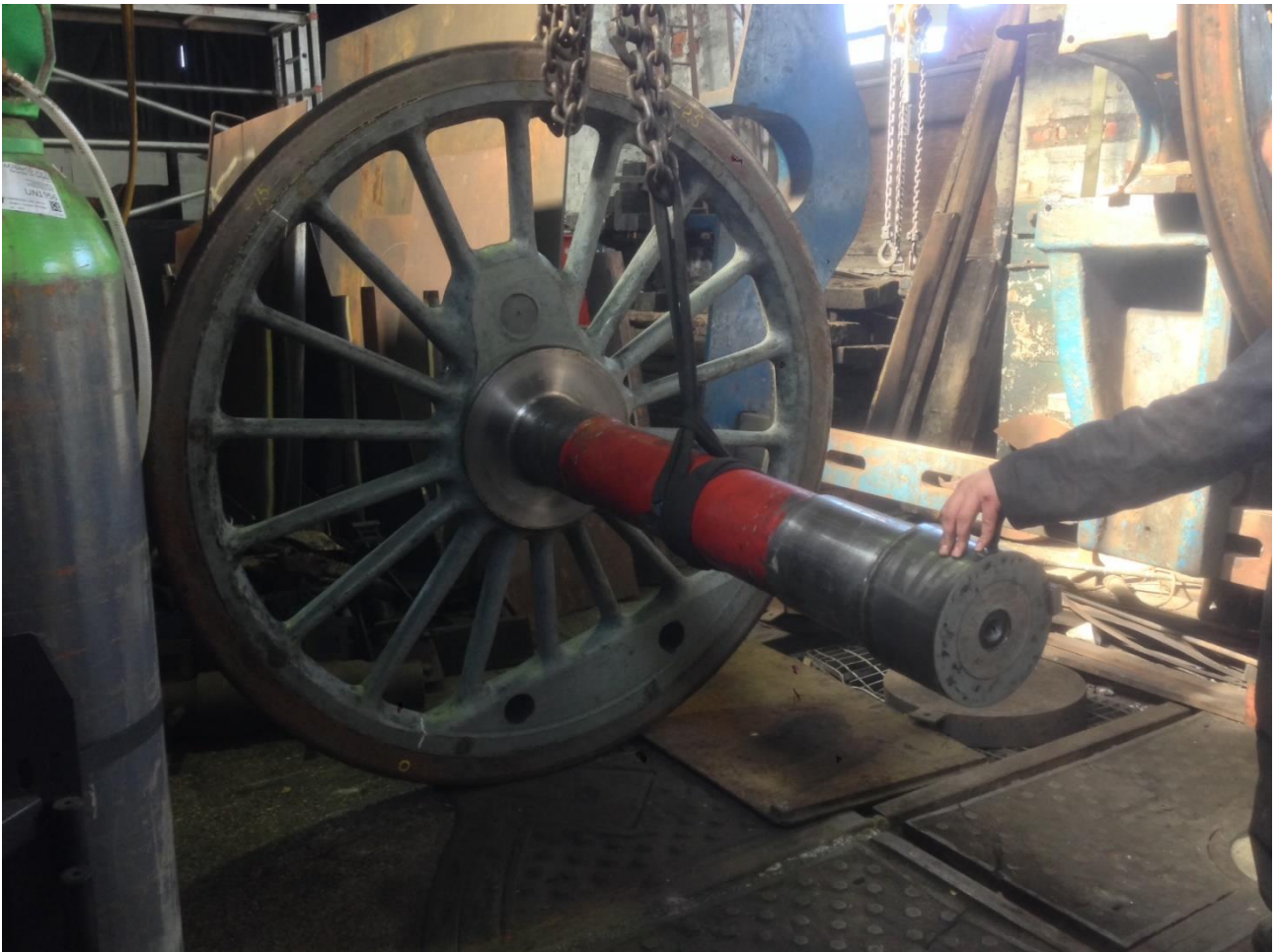
# B1 NEWS

**Newsletter of the Thompson B1 Locomotive Trust**

NUMBER 81

[www.thompsonb1.org](http://www.thompsonb1.org)

MAY 2015



*Not an image you might have expected to be seeing half-way through what was supposed to be the 2015 running season – see inside for more details.*

*Photo courtesy of Mark O'Brien*

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## Chairman's update

*Mike Cobley*

Our planned winter maintenance took a lot longer than expected with delays over the Christmas and New Year period getting the cylinder work completed. When we eventually got on to the wheeldrop to check the rear driving wheel axleboxes, additional work was found to be necessary to them, but even worse was to come when major cracks were discovered in the rear driving wheels, as you will read further in this newsletter.

With the prolonged repair work, the loco was not in a position to run the two proposed mainline tours with the Railway Touring Company in March and early April but this was fortuitous, as the Wansbeck tour was postponed, following Network Rail's decision to ban West Coast Railway Co's operations until May 15<sup>th</sup> following a very serious SPAD (Signal Passed at Danger) at Wootton Bassett.

Thanks to the unexpected wheelset issues, it doesn't now look likely that the loco will re-enter traffic for another 2-3 months at least, perhaps more. This means we are likely to miss the bulk of the NYMR's peak season, which as you might imagine is a big disappointment for both them and us, but these things unfortunately happen with old machinery.

In happier news, we welcome our new Treasurer, Alan Camp to the management team. Alan was an early member, coming down to Barry work parties and attending our monthly meetings in the 70s and early 80s. Yvette Horton has been helping him into his new role over the last few weeks and helping sort the paperwork associated with changes of names and addresses. A visit to any bank nowadays seems to require supplying security information and your passport to be able to deal with your own money!

David Buck's *Mayflower* has been flying the flag for B1s in the first quarter of 2015, even venturing over Southern Region metals, recalling the days when B1s were allocated to Stewarts Lane depot whilst Bulleid Pacifics were undergoing modification work.

Finally, belated congratulations to David and Yvette Horton on the birth of their bouncing boy, Daniel, in February.



*61306 Mayflower passing Watton-at-Stone working the Kings Cross to York 'Cathedrals Express' on 12<sup>th</sup> March 2015. Photo courtesy of Mike Cobley.*

## **Engineering report**

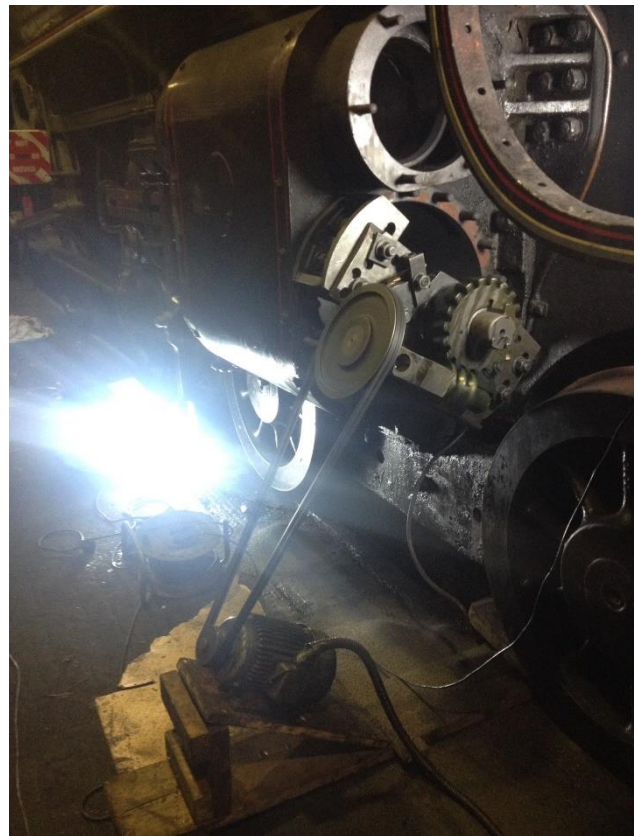
*Steve Andrews*

Work has continued to progress on the loco over the winter. In February, boring Dave (cylinders and piston valves) came and bored out the RHS cylinder and both LH and RH piston valve bores. The piston liner casting at Barrow Hill had been relocated from the back of the container and put at the front of the Rampart compound to be loaded on to my trailer. Moving this 15cwt liner casting was a challenge as we had to wait for a couple of frosty days to harden the soft ground so that the fork lift truck could lift the liner and move it - quite an adventure! The liner was lifted on to my trailer and towed by Paul Kaufman's Range Rover (with no heating for the passenger side). We then drove through Chesterfield to Buxton, Chapel-en-le-Frith, Glossop and then on to the M67 and M60 to the East Lancs Railway where Colin Green unloaded the liner for machining in the works.

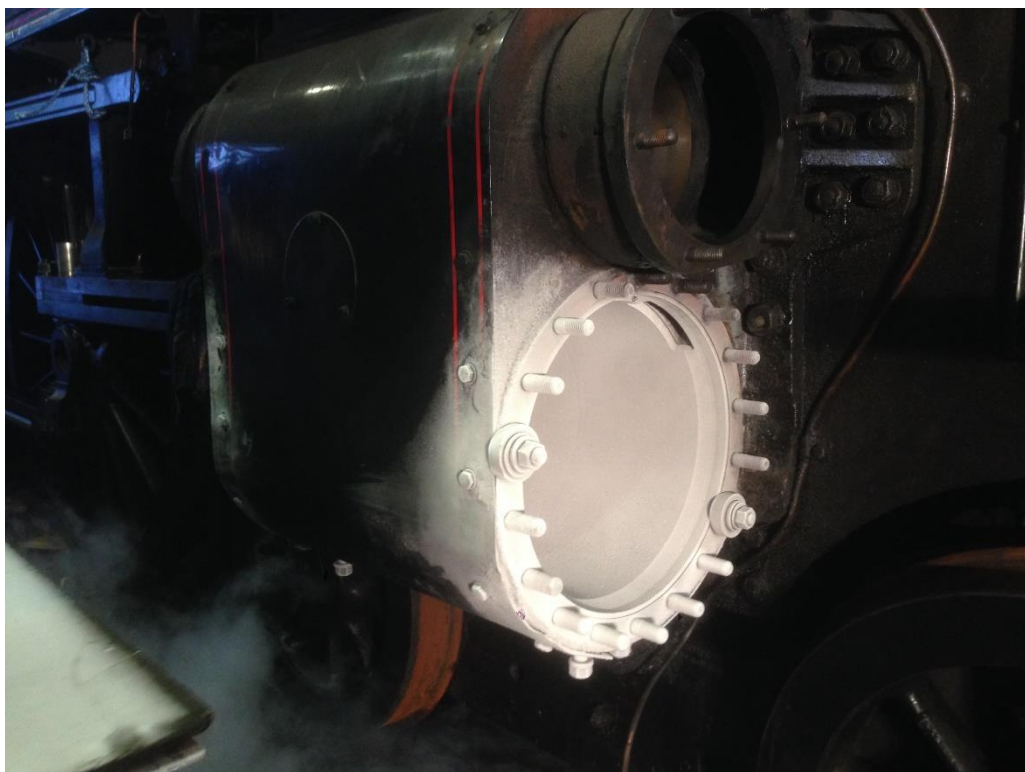
Whilst all this was going on I had machined four new piston valve heads. The spun cast piston valve pot was delivered from Spun Alloys in the West Midlands. After the entertainment of fitting the new liners they were frozen in liquid nitrogen and allowed to expand in the bore.

The cylinder drain cock holes were drilled using a hole saw. The bore was measured for the machining of the four off piston rings and the sixteen piston valve rings. The front cylinder cover then had to be machined to suit the smaller diameter of the liner. This machining work was carried out by Keith Parry and Dan of the NYMR workshop staff. Over the Christmas holiday I machined a new pair of safety valves as the old ones had cracks in. The NYMR already had a pattern as SR *Repton* uses the same type-3 inch Ross Pops.





*Left: The newly fitted safety valves mounted on the boiler ready for setting on steam pressure. Right: the boring gear is seen attached to the RHS cylinder during the process of boring it out to take a cylinder liner. Both photos courtesy of Steve Robb.*



*Condensation from liquid nitrogen coats the cylinder during fitting of the liner. Photo courtesy of Mark O'Brien.*

The piston slide bars were checked using the NYMR lining up equipment. The RHS was perfect but the LHS needed to be adjusted as this hadn't been done after the cylinder block was refitted to the frame at Barrow Hill in 2005. It wasn't out by much and both sides were done in a day and a half.

The piston valve crossheads were white metalled and machined and then checked for being in line. Fortunately they were. This has allowed the combination lever and valve rod to be fitted but the taper pins are 13/32 inch diameter and being non-standard, have to be made. They have now been fitted.

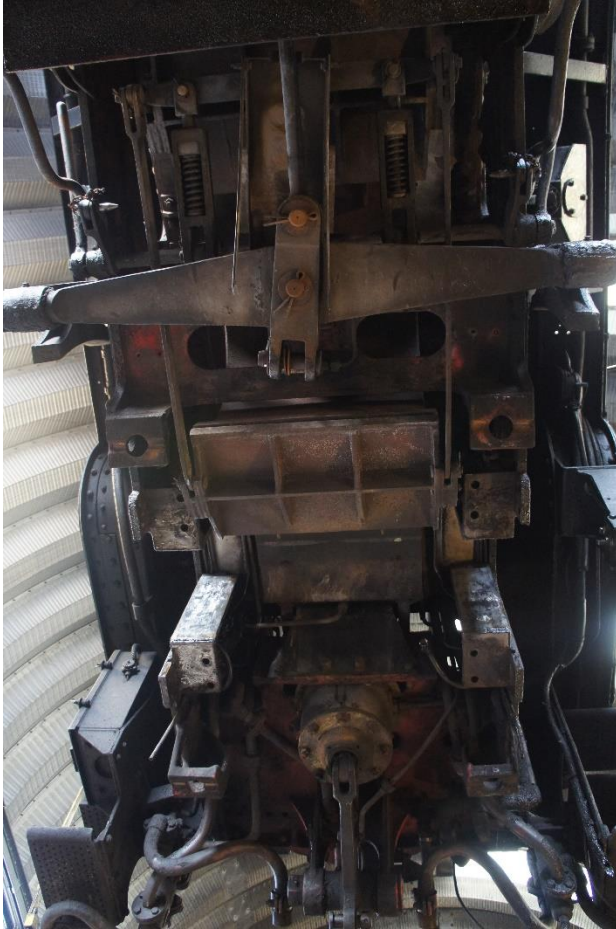
The ash pan has had a new spray pipe fitted as the connection at the back of the pan had come undone due to a fire melting the pipe. This should have been spotted at the washout or when grate sections are broken and need replacement. At my insistence the ash pan was made from 8mm thick Corten plate. This has saved the Trust money by preventing extensive work having to be carried out repairing holes burnt in the ash pan.

The trailing wheelsets have been removed on the NYMR wheel drop and the axleboxes taken into the machine shop. On examination and measurement it was found that the axlebox crowns had been poorly fitted and over-bored. The white metal had broken up because the crown was flexing and was also not properly tinned. It was also loose and some white metal fell out when the boxes were lifted off the wheelset. Work started straight away as two new crown castings were in stock. An epic amount of work was required together with skill in machining the crown and pressing it into the axlebox ensuring a tight fit and not spreading the axlebox.



*61264 snoozes in the wheel drop shed on a fine spring day ready for removal of the rear wheelset. Photo courtesy of Dave Fowler.*





*Left: the loco over the wheel drop having the trailing wheelset removed ready for the inspection of the axleboxes. Right: the rather unnerving sight of the loco perfectly balanced on the front bogie and remaining wheelsets. Both photos courtesy of Steve Robb.*



*The trailing wheelset lowered to reveal the axleboxes.  
Photo courtesy of Steve Robb.*





*One of the axleboxes removed from the rear wheelset. Photo courtesy of Dave Fowler.*



*The damage to the axlebox showing the white metal broken up and dropping out of the serrations in the bronze crown. Photo courtesy of Dave Fowler.*



I have worked with Keith Pardy on this and have machined the oilways and drilled the retaining bolt holes. Keith used the slotting machine to put the serrations in for the keying in of the white metal. This work is still ongoing. New bearings for the piston valve front covers have also been cast, white metalled and fitted.

The trailing coupling rod bushes have been white metalled and refitted. Also the RHS coupling joint pin, the keyway fretted and a new stepped key made and fitted along with new flat split cotters. New joint pin bushes were also made and fitted. There is still work to be carried out including fitting newly machined axleboxes, replacing the wheelset under the loco, fitting piston valves, retiming the valve settings and re-weighing the loco. It will be ready when it's ready!



*Steve Andrews carefully supervising the machining work.  
Photo courtesy of Dave Fowler.*

Dave Fowler's  $\frac{3}{4}$  drive socket appeal produced two responses from members. One was from Terry Hotby who kindly sent me two sockets, oddly enough the two that were missing from the set. Also Barry McGregor of Bedworth donated a  $\frac{3}{4}$  drive set along with boxes of lathe tools and engineers parallels. These are now with the rest of the parallels in the horizontal boring cupboard. The lathe tools have also been sorted out and used to restock the tool sets in the NYMR machine shop.

Many thanks for those donations.





*One of the bushes made by Steve Andrews for the valve spindle end cover.  
Photo courtesy of Dave Fowler.*



*The magnetic particle inspection of the little end pin.  
Photo courtesy of Dave Fowler.*



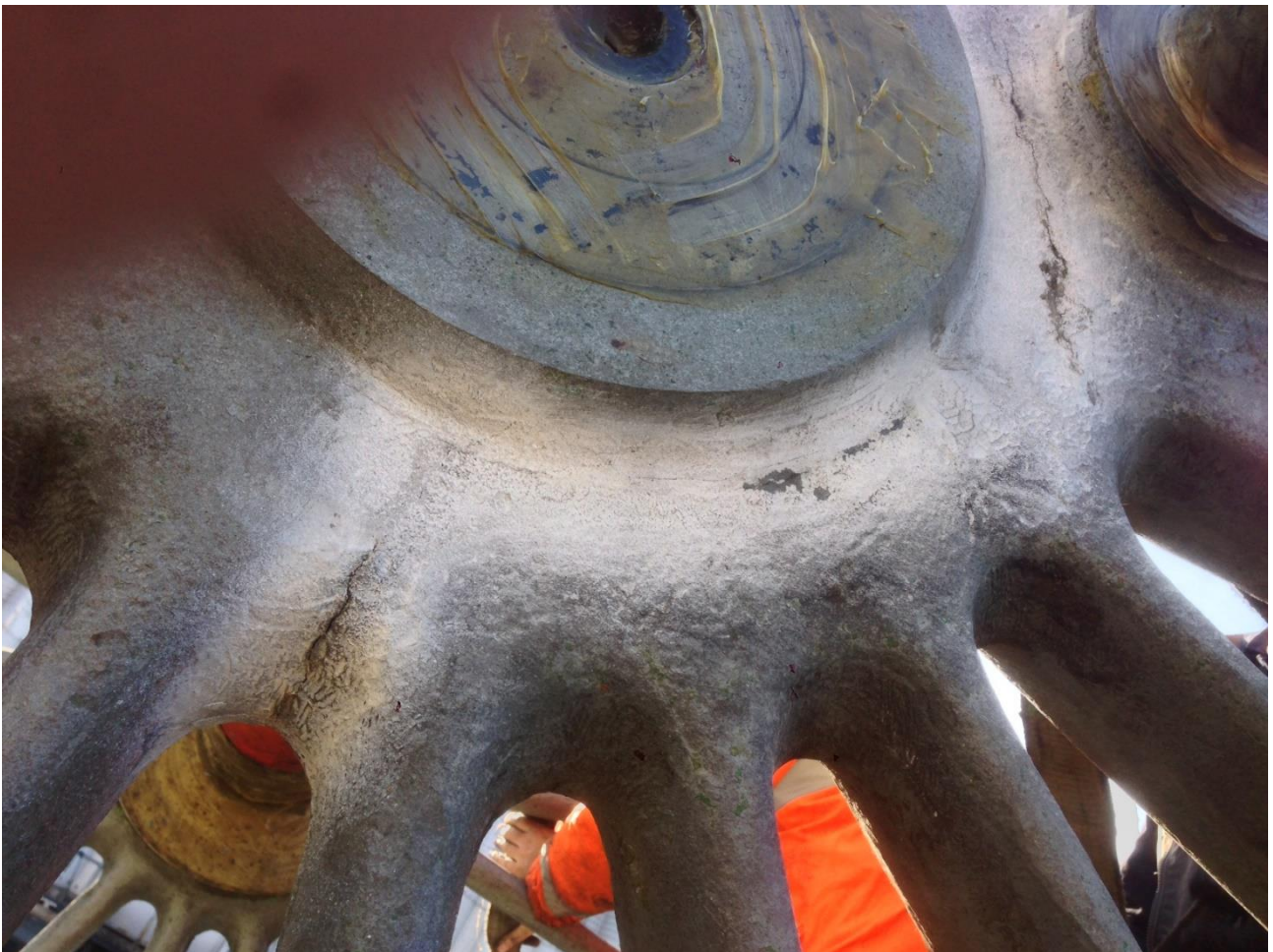
## Wheelset surgery

Dave Fowler

*(technical embellishments by Steve Robb, Mark O'Brien and Dave Horton)*

Just when we thought that we were on top of all the problems with the locomotive, along has come another and potentially more serious one.

It all started when Steve and I were admiring the needle gunning of the rear wheelset by the young NYMR apprentices when, on a fine sunny day, we noticed a drop of water coming out of a small crack on the RHS wheel hub. We brushed it off and were amazed to see it come back a minute or two later. Further investigation by Clive Goult and Graham Werrit (our NDT Engineer) resulted in Graham carrying out a crack detection test using dye penetrant spray on both wheel hubs. The results showed up two or three cracks on each wheel hub, the largest of which running circumferentially between the wheel hub and the crank pin.

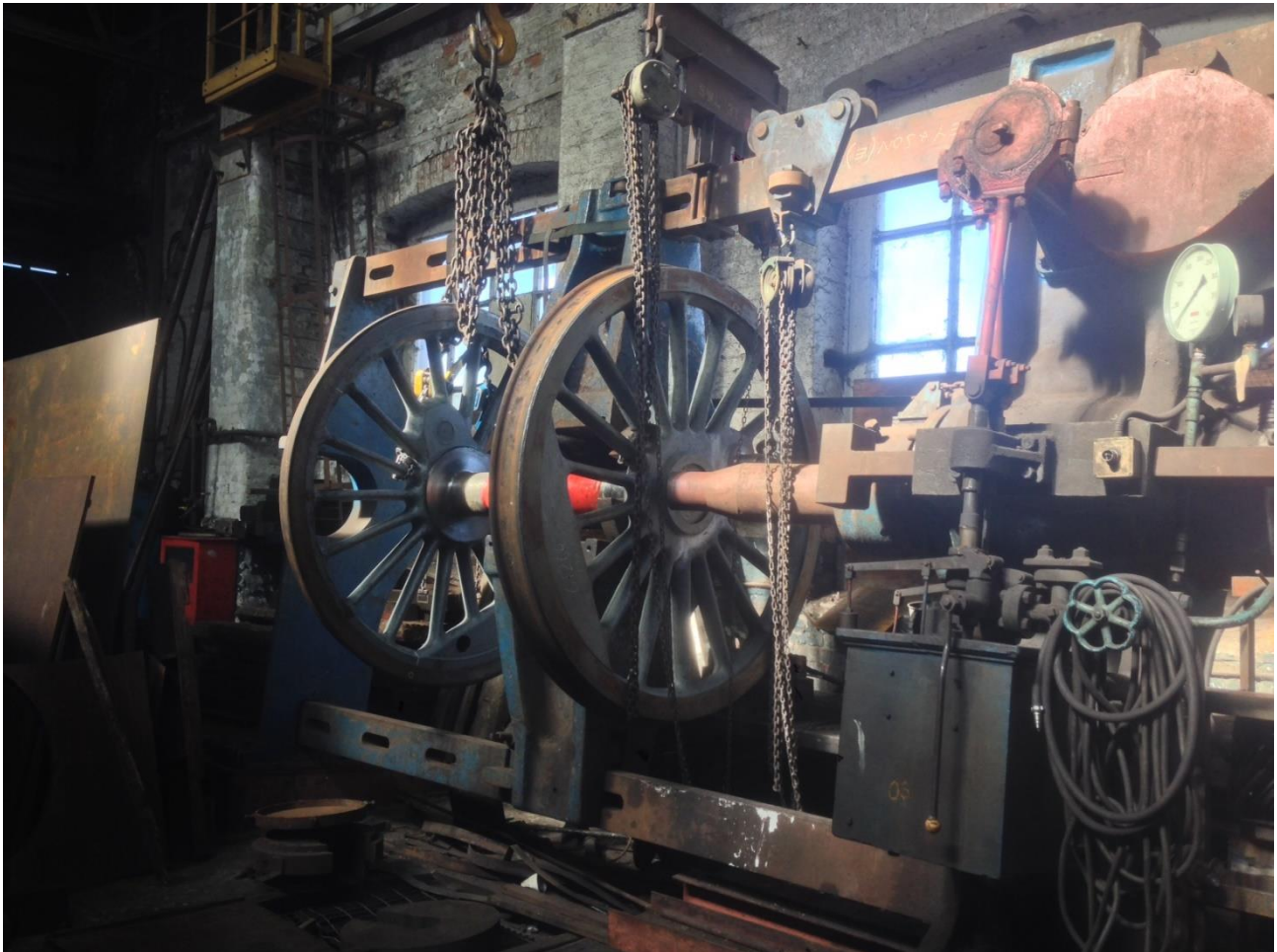


*Initial photos taken at Grosmont after crack detection with dye penetrant spray. The biggest crack runs circumferentially between the wheel hub and crankpin (top right), with others going radially between the spokes.*

Ian Riley was on site at the weekend and Mark O'Brien asked him to have a look at the wheels. Ian, whose company is certified to carry out wheel crack repairs, and has done so on *Flying Scotsman*, was of the opinion that remedial work was necessary and possible. Ian sent Mark a quote for the initial work and at a committee meeting on Tuesday afternoon attended by Clive and Steve Robb it was decided that we initiate the repair process as soon as possible.



The wheelset was sent to Ian Riley's on Thursday 16 April. On Wednesday 22<sup>nd</sup> April the wheels were pushed off the axle using Riley's 400 ton press. This in itself was quite a spectacle. It took an initial load of 275 tons to get the axle to move, which when it did move went with quite a bang - then around 150 tons to press it most of the way out before falling to 50 tons for the final few inches of movement. The other wheel took 350 tons to get it moving. Both wheel and axle are supported and the ram brought to bear against the axle end, not the wheel, to avoid bending the spokes whilst the initial pressure is built up.



*The press itself is water operated and has a maximum capacity of 400 tons over a 14 inch ram. It was built in 1910 by the Hunslet Engine Company of Leeds (incidentally – still designing and manufacturing shunting locomotives in Leeds as part of the Wabtec group), before being removed and installed at Riley and Sons in Bury.*

The wheels, having been removed, were then subjected to Non-Destructive Testing (NDT).

The results of the NDT showed that the cracks across the web between the crank pin and the wheel boss are 30 mm and 40mm deep, out of a total casting thickness of 180mm. We were advised by Rileys that due to the depth of crack, the proximity of the cracks to the crank pins, and the heat input to the wheel in the region of the cracks - that disturbance of the interference fit between crankpin and wheel would almost certainly occur, and therefore that two new crankpins will be required.

Wayne Jones, from our Vehicle Acceptance Body (VAB) had a brief look at the wheels whilst there on other business and advised the same.



*A once-in-a-lifetime view- hopefully (above left): one wheel having been removed from the rear wheelset, the key which prevents the wheel from rotating on the axle (as well as several hundred tons of interference pressure) can be clearly seen. Also of note is the 1 in 500 taper between the central portion of the axle and the wheel seat – this is designed to reduce stresses. Above right: both wheels sit on wooden blocks (to prevent further damage and to aid lifting) on the floor of Riley's workshop. Photos courtesy of Steve Robb.*

Riley's will now prepare a quote for the grinding out and welding up of the cracks. This is not straightforward as due regard must be given to the 'parent material' (i.e. that of the wheel) in order to choose the appropriate weld material. The parent material is effectively an unknown quantity until the results of laboratory metallurgical analysis are known. This work is currently ongoing, being managed on behalf of Rileys by RSA Labs in Manchester.

The weld process will require the wheel to be preheated so that both the casting and the weld expand and contract at the same rate. This is to avoid inducing stresses into the welded joint, and will also reduce the possibility of hydrogen cracking occurring - by driving off any surface contamination or moisture. Hydrogen cracking is a process by which metals such as steel can become embrittled and fracture due to the diffusion of hydrogen into the metal during the welding process.

At the same time, Riley and Sons are waiting for a quotation from RSA for the development of a welding procedure to overlay (build up with weld) the hole in the wheel boss - to ensure that the interference fit between the wheel and axle is correct, as it was clear that this was not the case when the wheels were pressed off the axle. This process is a British Railways repair which involves building up the hole in the wheel casting then boring it out to the correct dimensions to achieve the required press-on pressure of 12 tons per inch of diameter of the axle. Every procedure will have to be approved by our VAB before work commences.

If this is all successful, the wheels will be refitted to the axle and the tyres skimmed to check for true. Following that, the other two driving wheelsets will be removed and sent to Riley's for checking and tyre turning. The bogies will also have to be sent for tyre turning in order to maintain the correct ride height. Although this is a setback for us, we are fortunate to be able to finance this operation from our own funds. We will keep you informed as the situation develops.





*Awaiting repairs, 61264 stands in the yard at Grosmont.  
Photo courtesy of Dave Wellington.*



*Clearly devoid of its rear wheelset, 61264 stands in the yard awaiting further investigation  
to be carried out. Photo courtesy of Dave Wellington.*

## **TBLT Members' Day postponement**

*Alf Bousie*

Unfortunately, because of the problems that have suddenly been encountered with the loco's rear wheelset, the proposed Members' Day, scheduled for Saturday 6<sup>th</sup> June, will now have to be postponed. It will however take place later in the year and members will be notified of the revised date in due course.

## **Meet the man**

*Dave Wellington*

In an occasional series, and on the pretext that a preservation society is only as good as its officers in charge, Dave Wellington goes out to discover more about the men at the helm of the TBLT....

### **Mike Cobley**

Mike's first encounter with a train was at the age of 4 when his dad took him to see *The Golden Arrow* in Dover. He was actually born in Letchworth in 1945 but the family moved to Canterbury for a short time before settling in Harpenden in 1952, with his dad working for De Havilland. Kent also gave Mike an early appreciation of the Romney, Hythe and Dymchurch Railway, but later as a St Albans Grammar schoolboy he became more familiar with the LMS Garratts and Crosti 9Fs that laboured down the Midland Main Line just ¼ mile from home.

Mike's first job in 1964 was working for a local estate agent; this lasted for 17 years. He had been a member of South Bedfordshire Railway Society but after missing out on a trip to Scotland left the club and at the age of 20 switched interests to cars; first driving a Morris Minor and then graduating to the ownership of a Jaguar XK140 drophead, purchased for £35.

However, railway topics re-emerged after Mike let a shop in Station Road, Harpenden to a certain Mr Peter Aylett, who was involved in the Stour Valley RPS, a group trying to raise funds to secure a BR ex Kings Cross Suburban coach for preservation. The group met at The Eagle – Ponders End, near Enfield, and in 1973 this is where Mike met Steve Andrews. The group expanded, bonded and prompted by a couple of MGN Society tours, set up a mini-bus visit to Barry Docks – merely to view. Still with coach preservation in mind a new Society was set up – the Rolling Stock Society – and fund raising rail excursions were organised.

Meanwhile, John Standing – another Stour Valley member, wrote to BR for a quote to buy an engine. Their interest was in an S&D 2-8-0 and the Fowler 4F 44422, but those locos were already reserved, so interest turned to the B1. The Rolling Stock Society changed its impetus to the B1 and a committee was formed – Mike becoming treasurer and personally guaranteeing a third of the balance to the bank against their loan to the society to acquire the loco. The year –1975.

By 1979 Mike was married with two children and said goodbye to Estate Agency, joining Rentokil as a surveyor. At the same time he took over the position as Chairman of the TBLT from Peter Aylett, a position he relinquished in 2000. Still living in Harpenden, Mike gathered a team of helpers and established a modellers' sales stand to raise funds, attending up to 50 exhibitions and swapmeets per year. He also took the B1 slideshow on the road.



Leaving Rentokil in 1991, similar jobs followed in timber preservation companies before ending his career in a 12 year stint with Herts County Council as surveyor for their Housing Association.

Retiring at 65, in 2010, Mike now has time to spend on his two and a half allotments; with his 4 grandchildren and with friends on trips, with his camera, to Europe – or further, remembering with fondness a trip to record India's Railways. Plus another stint as chairman, a position he still holds.

When asked for his best memories, the B1's first day steaming at Loughborough comes to mind and the ensuing Member's Day. He also recalls fondly, lying in the heather in Scotland as *The Jacobite* rolled by, and the enjoyment of a seven day stint on that train as part of the support crew.

### Regrets?

With easy access up the M1 to the B1 at Loughborough, and having fired *Boscastle* and *Canadian Pacific* as a passed cleaner, Mike harbours the thought that if the engine had continued to be based there, he might have become a driver.

Two things have remained a constant in Mike's life; a home in Harpenden for most of his life and an allegiance to the B1 for over half his life. There is plenty of time for more highlights too, as many more beds of heather can be found over the moors of North Yorkshire.



*Mike on the right, is seen with Dick Hardy in the centre and Jim Gurnett on the left, at the time of the Boiler Stay Appeal in 1990.*

## **Brian Mick**

As this edition of the newsletter was about to go to press we learnt with sadness of the sudden death of Brian Mick on Wednesday 15<sup>th</sup> April 2015. It was a particular shock as one or two of us had been speaking to Brian only days before on the phone.

Brian had moved to Northern Ireland some time ago but still helped maintain the Trust's database of members.

Our condolences go to his widow, Ethna and the rest of the family at this sad time.

## **Bert Hitchen**

Another sudden death that we sadly have to report is that of Bert Hitchen, former owner of Taw Valley, current owner of Black Five 45231 and also listed as the owner of Freightliner diesel loco 66598.

Although not a member of the Trust he was very instrumental in helping get 61264 back to full working order in the tempestuous period 1996/97 at Loughborough, working with his mate 'Bubbles' under Steve Andrews' guidance.

We also worked together with him and Brian Cooke under the Heritage Traction banner for 'Steam on the Met' and our first season in Scotland working the Jacobite.

He was a nationally renowned cyclist in his younger days, twice the National Road Race Champion and twice winner of the London - Holyhead Classic.

No date yet for his funeral but the Trust will be represented.

## **Ken Bayley**

Just as the December Newsletter was being circulated we received the sad news that Ken had died on Saturday 6<sup>th</sup> December at the age of 81. A dog walker had found Ken's body close to the railway line at Roydon, close to his home in Hertford, some two hours after the steam special with two Black Fives had passed by, so it is nice to think that he departed this life doing what he enjoyed most - watching steam trains.

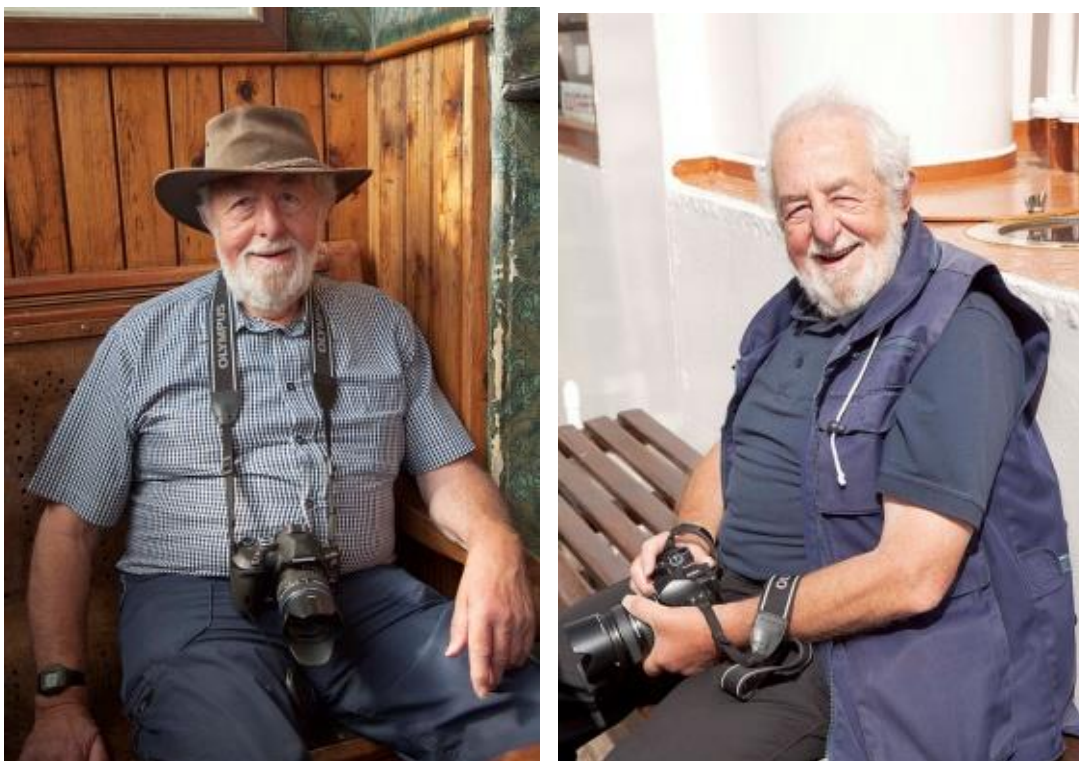
Affectionately known as the 'Old Git' he was a steward on many of the popular railtours run by S.L.O.A., UK Railtours (formerly Herts Railtours) and Past Time Tours but he is probably best remembered within our group for his involvement in the end of season West Highland photo charters at the end of the Jacobite running season in October each year.

He was also involved with other locomotive groups: Stanier 8F Society, PRCLT 6201, Stanier Mogul Fund (42968), A4 Loco Society (60007), Battle of Britain Loco Society (34081), a stalwart member of the Severn Valley and Keighley & Worth Valley Railways and a regular member of his local Stevenage Locomotive Society. He spent his working life as a Pension Officer for BP.

Ken's Funeral was held at Stevenage on 6<sup>th</sup> January, attended by around 200 of his friends and colleagues.

Our condolences go to his son Steve and family and his many, many friends.





*Ken Bayley. Photos from John Stiles collection.*

## **150 Club update**

*Stephen Harris*

The 150 Club has for many years contributed to TBLT finances with the net profit from the monthly draws going to the Trust. This has usually been about £1000 year, but steadily rising postage and administration costs will reduce the profit.

Only once in the last fifteen or more years has there been an increase in the cash prizes, in 2008, and that was only a £5 increase. It seems to me that in 2015 the monthly prizes are now not very exciting at £30, £20 and 2 x £10 prizes.

I am proposing that we should consider doubling up of the subscription to £2 per number and prizes to £50, £40, £30 and £20 each month, with a quarterly increase to £100 for the 1st prize. This proposal will only work if most numbers (maximum 196) are subscribed. It would be helpful if all members who have an interest in supporting the Trust this way and having a little flutter at the same time could let me know their opinion.

A positive response can be implemented from the start of the 150 Club year on 1<sup>st</sup> July 2015 with a potential annual return of nearly £2000 to support the Trust.

### **150 Club members please let me know if you would:**

- a. Continue to support the same numbers i.e. double your subscription
- b. Maintain your current subscription and reduce the numbers subscribed.
- c. Withdraw from the 150.

**Non 150 Club members please let me know whether the proposed changes would:**

- a. Encourage you to support the 150 Club and take out a number or numbers.
- b. Make it less likely for you to support the 150 Club

You can contact me by phone at 01494 813551

By text at 07879 498999

By email at [stephenharris@hotmail.com](mailto:stephenharris@hotmail.com)

By post at 3, The Larchlands, Penn, Bucks. HP10 8AB

## **150 Club**

*Stephen Harris*

<b>2015</b>	<b>Special</b>	<b>£30</b>	<b>£20</b>	<b>£10</b>	<b>£10</b>
January		180 L Little	48 S Barrington	33 A Angus	19 B Mick*
February		78 Mrs R King	193 A Lightowler	121 S Ackley	56 C Clarke
March	£50 166 Mrs E Blair		102 A Hartford*	47 S Barrington	59 D Wellington*
April		83 B Mick	46 S Barrington	3 L Little	34 B Rich*
May					
June	£50				

\* denotes prize donated to TBLT

If you would like to subscribe or increase your subscription please contact:

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