



# Newsletter

Keeping Shareholders Informed



Issue 16

Winter 2021

The 4253 Locomotive Company Limited, based in Rolvenden, Kent, is a non-profit, non-political organisation. Reproduction of photos by permission of The 4253 Locomotive Company.

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## AGM - funding decisions

**This year's AGM was held in St Michael And All Angels Church Tenterden, by kind permission of the Parish Administration and was well attended by our shareholders.**

The full Minutes of the AGM will be distributed separately by the Company Secretary, but here are the key items discussed.

Henry Mowforth gave a detailed engineering report on the work carried out over the last 18 months, which included a period of lockdown where progress was halted both here and at HBSS in Liverpool.

Jerry Preston-Ladd then gave a detailed explanation of the financial situation regarding the monies received, the monies spent and the cash situation which shows a deficit in available funds to complete the work on 4253, particularly the boiler at HBSS in Liverpool.

The total estimated amount required to finish 4253 is £95,500. Currently there will only be £69,830 available by the end of 2022 resulting in a shortfall of £25,670.

*How has this come about?*

Basically, we incurred £29,825 of unexpected remedial work on the boiler after it arrived at HBSS and had been fully stripped and there was an additional £5,700 over the initial estimate amount for rod manufacture.

Couple this with 18 months of no fundraising due to shows and Santa Specials being cancelled because of Covid (from which we estimate a figure of £25,000 revenue was lost) we can say we have suffered financial hits totalling £60,525.

Additionally, having weighed up the pros and cons of 4253 volunteers tubing and caulking the boiler, against HBSS undertaking that work *and* successfully completing the hydraulic testing before it comes back to Tenterden; it was decided the best option for speed

and efficiency was for HBSS to do it. However, this requires an additional £18,700 in expenditure which is included in the £95,500 figure above.

*So what to do?*

Several suggestions were made from the floor, one of which was enthusiastically agreed by all attending, and that was, if every shareholder donated £56 each, the deficit would be covered. Now at first glance, that sounds a great idea, but of course we understand that, in reality, not every shareholder is in a position to do this.

So rather than ask everyone to do that; we are asking those shareholders who can do so, to buy another share, purchase some merchandise, support us with sponsorship for an item such as the existing Plug The Gap and Stay With Us appeals. We are currently looking at which other items are suitable for sponsoring. Alternatively, a simple donation will help.

Other ideas were discussed, in particular a raffle to be held in the summer, something we have not done in the past; it has always been at Christmas time. However, the truth is we need the cash earlier rather than later so as to avoid slowing down the work at HBSS. The drawing of the raffle to be held at Woodchurch Steam Rally on Sunday 7<sup>th</sup> August 2022. Offers of prizes most welcome!

**The bottom line is that, without some additional funding, we may be forced to slow the rate of work on the boiler which will obviously put back the time when 4253 returns to steam - and none of us wants that. Already, many of the directors and the volunteers who work on the project have stepped up and contributed and we simply ask that you join them in helping to get the job finished.**

*See page 5 to find out how you can help!*

## 4253 Mark Yonge

Many shareholders may well have known 4253 Director, Mark Yonge. It is with great sadness we announce that Mark passed away just before Christmas, following a long illness. The 4253 Locomotive Company send our condolences to Mark's wife Alison and his family.

Together with having been a Stationmaster and a former Trustee and Chairman of the Kent & East Sussex Railway, he was also a keen supporter for the extension to Robertsbridge and the Robertsbridge Station project with the Rother Valley Railway.

Mark was a long time 4253 Director and joint editor of this latest incarnation of the 4253 newsletter.

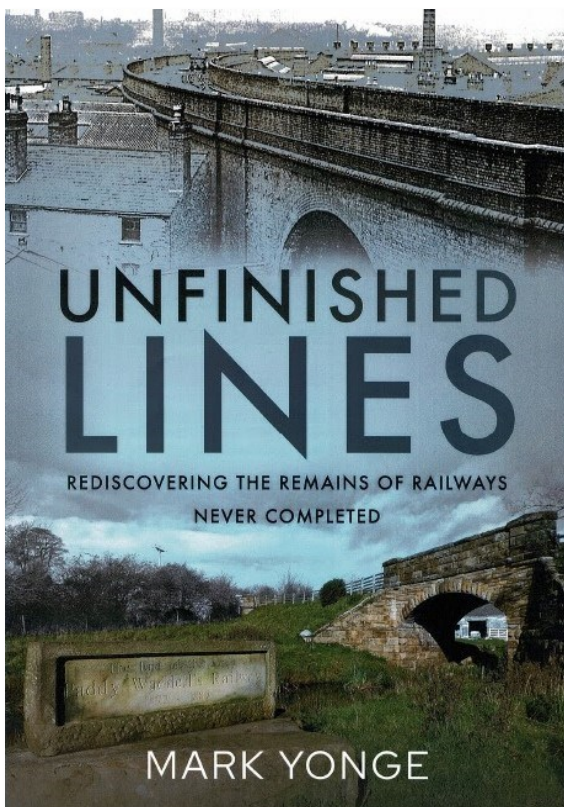
Having been asked, along with Dave and Kelvin, to take on and edit a revamped newsletter in 2019, Mark instantly came up with all sorts of ideas and put lots of things in the pipeline.

Unfortunately, even at that early stage Mark felt that due to his illness he was unable to continue and devote the necessary time to the newsletter and so he gracefully retired.

**Mark had also been working on his book 'Unfinished Lines' which was published just before his death.**



**Mark (on the right) with Kelvin and Dave at a 4253 newsletter meeting in 2019.**



### **Synopsis of Mark's book:**

*"Mark Yonge had, for many years, wanted to write a book about railway projects that were started but never completed. The physical evidence of these works throughout England although rapidly vanishing, can still be seen in places to this day. The reader can view several examples which include viaducts, earthworks, bridges, partially completed tunnels, an abandoned tunnel boring machine and the beginnings of a major London airport. Behind all these tales are stories of intrigue, manipulation, interference by the armed forces and sometimes great sadness brought about by personal ambition and loss. These remaining assets are in the main, not protected by legislation and are thus at risk of demolition at any time. It is to be hoped that this record of their existence in 2020s may go a little way towards recording some of our more interesting and neglected features of railway history for the benefit of future generations."*

Published by Pen & Sword Books Limited 2022.



## 4253 The Smoke Box

Whenever we see a locomotive travelling along, it usually has clouds of white steam/smoke billowing from the chimney. However, depending on the state of the coal, the fire etc, it can be brown or black and accompanied by sparks shooting up – *but that's another story*. We are here to look at the smoke box.

You may remember that back in 2017, I wrote a report on the making of the smoke box, finishing the article with a photo of what it looked like back then.

So, what does it do? Why is it a vital part of a locomotive? There is a lot to tell, but I have shortened it as best I can to the basics. You can find far more in-depth reading on the internet.

The smokebox appears to be a forward extension of the boiler although it contains no water and is a separate component.



When you look at it, there is obviously a door on the front, but it is no ordinary door. It has to be completely airtight to allow the inner functions to work properly. In the centre are what I like to term, the clock handles, as they normally look to be at half past 4, or 20 past 8 or similar. One is in fact the handle to locate the door on to the locking bar, and the other is the one that tightens the locking bar so that the door is completely sealed. Open this door and there is a lot to see. (A typical layout can be seen *below*, in GWR 4144's smoke box).





## 4253 The Smoke Box *continued*

Smoke and hot gases pass from the firebox through tubes where they pass heat to the surrounding water in the boiler (*see diagram right*). The smoke then enters the smokebox and is exhausted to the atmosphere through the chimney.

The blast of exhaust steam from the cylinders, passing through the blastpipe with an appropriate design of exhaust nozzle within the airtight smokebox, exits through the chimney directly above it and, in so doing, draws hot gases through the boiler tubes and flues and, consequently, fresh combustion air into the firebox. The blastpipe is what produces the characteristic "chuff" sound.

To assist the passage of the smoke and hot gases, a blower is often used. This is a pipe ending in a ring encircling the top of the blastpipe containing small holes, which creates a 'ring' of steam jets. The steam forces out the smoke and draws further gases through the tubes. This in turn causes air to be drawn through the grate and firehole, making the fire burn hotter.

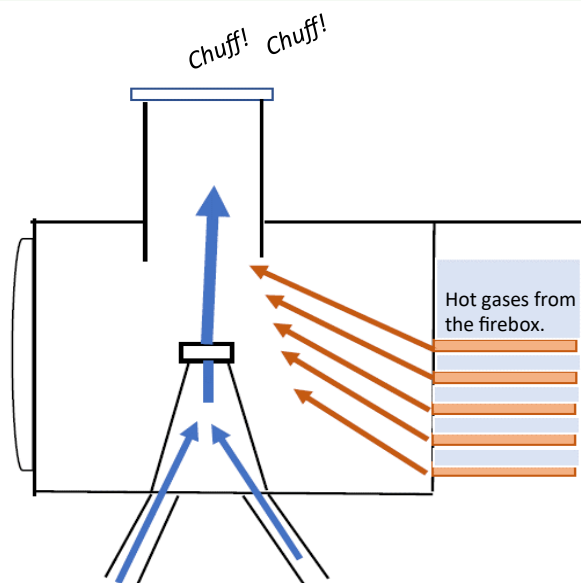
The dimensions of the blastpipe and chimney are critical to the steam generating capacity of the locomotive and its fuel economy, since there is a natural trade-off between a high-velocity steam jet giving a strong draw on the fire, and back-pressure on the exhaust. Small changes to this 'front end' design can have a dramatic impact.

The smokebox also provides a convenient collection point for ash and cinders ("char") drawn through the boiler tubes, which can be easily cleaned out at the end of a working day. Without a smokebox, all char must pass up the chimney or will collect in the tubes and flues themselves, gradually blocking them.

Locomotives fitted with a superheater (as is 4253) will have a superheater header in the smokebox. Steam enters the header via the regulator as 'wet' (saturated) steam, and then passes through either one or two rows of superheater elements. These take the form of a pipe which runs twice through an enlarged flue tube in the boiler thereby further heating the steam which then enters a separate chamber in the header, this time as superheated or dry steam, before passing to the cylinders.

The advantage of superheating is that the steam has greater expansive properties when entering the cylinders, so more power can be gained from a smaller amount of water and fuel.

So, there you have it. The smoke box!



**4253's superheater manifold, ready for fitting.**

# GWR 4253 Restoration Appeal

If you would like to see *YOUR* locomotive running again under its own steam,

**PLEASE HELP TO MAKE THAT HAPPEN  
... SOONER, RATHER THAN LATER!**

On the following pages are application forms for **Plug the Gap** and **Stay With Us** appeals.

If you can help in any way, no matter how small, please either **Buy a 4253 Share**,  
**Sponsor Plugs** and/or **Stays**,  
or simply make a **Donation** to help get your locomotive back into steam.

*We once again thank all shareholders for their continued fantastic support with this historic restoration project.*

**To make things easier, we have put all the options on our website where you will also be able to view our range of merchandise.**

**Please go to: [www.4253.co.uk](http://www.4253.co.uk)**

If you would like to sponsor one or more 4253 Washout Plugs,  
please complete the Plug the Gap form below.

Alternatively, you can also sponsor Washout and Fusible Plugs directly on our  
website. Please follow the link below:

<https://www.4253.co.uk/shop/fundraising/plugs/>



## GWR 2-8-0T Locomotive 4253 'Plug the Gap' Application Form

Please complete the form below in **BLOCK CAPITALS** and return to:  
**The 4253 Locomotive Company Limited**  
**Old Chilmington Oast, Chilmington Green, Ashford, Kent TN23 3DP**

Full Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

I hereby make an application for:

\_\_\_\_\_ Washout Plug(s) @ £45 each    \_\_\_\_\_ Fusible Plug(s) @ £45 each = Total: £ \_\_\_\_\_

☐ I enclose a cheque made payable to: The 4253 Locomotive Company Limited.

☐ I will pay by BACS (Bank details below): Please use reference 'PLUGS'.

I am a member of The Kent and East Sussex Railway: Yes / No (delete as appropriate)

☐ I consent to being contacted by 4253 Locomotive Co. via email/post  
for information updates about 4253 progress and activities.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

**PLEASE MAKE PAYMENTS TO:**

**The 4253 Locomotive Company Limited**

**Account Number 47817011 • Sort Code 60-01-21**

**National Westminster Bank Plc.**

**20 High Street, Ashford, Kent. TN24 8SH.**

**The 4253 Locomotive Company Limited**

**25 Winsor Road, Rolvenden Layne, Tenterden, Kent. TN17 4NL Share**

November 2021



# Stay With Us!

**A COMPELLING OPPORTUNITY TO HELP BRING TO FRUITION THE NATION'S MOST EXCITING LOCOMOTIVE RESTORATION PROJECT - SPECIFICALLY TO COMPLETE OUR BOILER!**

**WE ARE PLEASED TO INVITE YOU TO SPONSOR**

**CROWN STAYS    RIGID STEEL STAYS    COPPER STAYS**

## Your chance to help finish the boiler

2019 saw major inroads into our boiler restoration.

However, as the year progressed we realised that we had an opportunity to accelerate the refurbishment work on our locomotive to an earlier conclusion than originally envisaged.

So, with the blessing of our shareholders present at the January 2020 AGM, we immediately arranged for our boiler to be dispatched to Heritage Boiler Steam Services of Liverpool, where work has been progressing steadily ever since.

We had the financial resilience, we had the confidence in our own decision making ability, we had projects in the pipeline and we knew our team could cope with and close the funding gap that existed at that time.

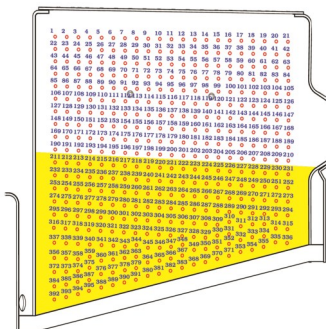
## The Layman's Guide to Boiler Stays

Of all the components found in the construct of a locomotive boiler, the humble stay is probably the most important.

The thrust of our 'Stay With Us!' campaign is aimed at those encompassing the burning heart of any steam locomotive - the firebox. A seemingly innocuous piece of engineering, boiler stays are generally composed of a steel or copper rod, threaded at each end and depending on location, vary approximately between 6" & 16" in length. In keeping with Swindon practice 4253's firebox area has a copper inner and steel outer wrapper, with a water space between them - in front of, behind, above (the crown) and on the sides.

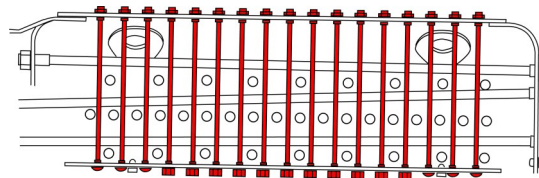
The stays are braced between the two in all these areas, strategically providing rigidity and flexibility to what is essentially a massive pressure vessel. The material used is in accordance with the relevant stress design criteria. They are basically screwed into position and riveted over to finish and seal.

Outwardly they have a neat and innocent looking domed



### Firebox wrappers

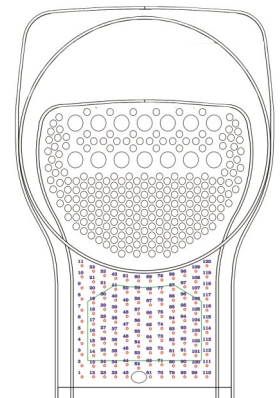
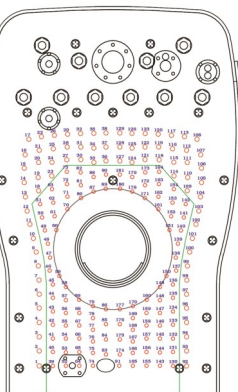
A combination of copper and rigid steel stays. We are renewing all throatplate stays, backhead stays, crown stays and a percentage of the side wrapper plate stays. The stays within the



**Cross section of firebox**  
Side view showing crown stays and nuts (in red). 174 stays are required to

## How You Can Help

You can sponsor a set of 3 stays for £99. Each set comprises 1 crown stay and 2 nuts, 1 copper stay and 1 rigid steel stay.



	Per Stay	Per Set of Stays	Total No. of Stays
Rigid Steel Stay	£17.50	} £99.00	412
Copper Stay	£35.00		288
Crown Stay & Nuts	£50.00		174

By sponsoring any of the above you will receive a personalised certificate and be entered into a draw for

**Please help get YOUR boiler back into steam!**

**Application to set up a Bankers Standing Order for 'Stay With Us' appeal (minimum 2 sets).  
Please print, complete the form and post to the address shown below.**



## **GWR 2-8-0T Locomotive No. 4253 'Stay With Us' Application Form**

Please complete the form below in BLOCK CAPITALS and return to:

The 4253 Locomotive Company Limited, Old Chilmington Oast, Chilmington Green, Ashford, Kent TN23 3DP

Full Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

I hereby make an application for \_\_\_\_ Rigid Steel Stay(s) \_\_\_\_ Copper Stay(s) \_\_\_\_ Crown & Nuts Stay(s)  
and / or \_\_\_\_ Complete set(s) of Stays.

I enclose a cheque made payable to The 4253 Locomotive Company Limited / a completed Bankers Standing Order  
(*please delete as appropriate*).

STANDING ORDER OPTION ONLY AVAILABLE IF SPONSORING COMPLETE SETS OF STAYS - MINIMUM 2 SETS.

I am a member of The Kent and East Sussex Railway: Yes / No (*please delete as appropriate*).

☐ I consent to being contacted by 4253 Locomotive Co. via email/post  
for information updates about 4253 progress and activities.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

## **Bankers Standing Order Form ('Stay With Us')**

(if you wish to pay by monthly Standing Order over 6 months)

To the Manager: \_\_\_\_\_ (Your) Bank

Your Bank Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please make 6 payments of £ \_\_\_\_ on the \_\_\_\_ day of every month commencing on \_\_\_\_ / \_\_\_\_ / \_\_\_\_ to:  
The 4253 Locomotive Company Limited, Account Number 47817011 National Westminster Bank Plc.  
20 High Street, Ashford, Kent TN24 8SH. Sort Code 60-01-21.

Account Name: \_\_\_\_\_

Your Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sort Code: \_\_\_\_\_ Account Number: \_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

\*Please quote Reference Number in all payments \_\_\_\_\_ \* to be entered by 4253 Project Staff.

The 4253 Locomotive Company Limited, 25 Winsor Road, Rolvenden Layne, Tenterden, Kent TN17 4NL - Stays