



Newsletter

Keeping Shareholders Informed



Issue 20

Spring 2023

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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2023 AGM well attended

The January 4253 Locomotive Company AGM was held on the 14th in the Tenterden Town Station Buffet.

As usual, it was well attended with directors being re-elected by rotation together with the election of our new Company Secretary, Neil White. There is a picture of Neil on *page 13* together with a short introduction and an email address if any shareholders would like to contact him.

Our financial director, Jerry Preston-Ladd, gave an on-screen presentation outlining our financial situation and its relation to progress made and progress forecast. *Jerry's financial report and explanation can be read on the following pages.*

Also, our 'chief engineer' Henry Mowforth, gave a long and interesting detailed account of the progress in 2022 and his expectations for progress of the project in 2023. Perhaps his main theme for 2023 was to downplay early expectations of the boiler's return and the loco suddenly chuffing down the line. He outlined that even with the boiler back at Rolvenden, there would be much work to be done.

The big lift!

Tuesday 21st February saw a contractor arrive at Rolvenden to lift off 4253's chimney, cab and both tanks and place them in a temporary holding area.

Having filled the tanks with water last year, a small number of rivets were found to leak, along with a small area in the front corner of the fireman's side tank. Lifting the tanks off allows us to sort these problems before they are finally fitted back on to the loco when the boiler is back in the frames.



Also with the tanks off, it gives time to carry out an assessment of any painting that needs to be completed. 4253 has spent most of its life just sitting out in the UK weather which didn't stop after it arrived at Rolvenden, during the long restoration. Unfortunately the sun, rain and snow all take their toll on the paintwork. A final coat of paint can now be applied before the boiler's return.

Pages 6 and 7 show more pictures of the lift in progress.

2023 AGM FINANCIAL REPORT

The AGM held on 14th January included a presentation giving details of the amounts and sources of all funds received during the 12 months to 1st July 2022, together with a breakdown of the expenditure incurred during the same period.

INCOME - 12m to Jul 2022

• Fully paid shares	£29,000
• Partly paid shares	£25,435
• Fundraising	£25,386
• Loans	£11,600
• Sponsorship	<u>£ 6,059</u>
SUB TOTAL	£97,480

INCOME - 12m to Jul 2022

	B/Fwd	£97,480
• Donations		£ 2,161
• Sales		<u>£ 350</u>
TOTAL		<u>£99,991</u>

EXPENDITURE - 12m to Jul 2022

• Boiler refurbishment	£ 76,296
• Materials	£ 35,758
• Services	£ 5,342
• Consumables	£ 3,647
• Bank & Accountancy Charges	<u>£ 1,065</u>
SUB TOTAL	£122,108

EXPENDITURE - 12m to Jul 2022

	B/Fwd	£122,108
• Administration		£ 983
• Carriage		<u>£ 399</u>
TOTAL		<u>£123,490</u>

**DECREASE IN CASH HELD (after
Allowance for VAT owed) £24,882**

This was followed by a calculation of the remaining 'big ticket' areas of expenditure, sources of funding and the current expected level of shortfall.

REMAINING COSTS

Labour re Boiler	£32,500
Flue Tubes	£ 9,800
Rivets, cladding, paint etc	£ 7,900
Bearings & Pins for Rods	<u>£ 6,000</u>
Sub Total	£ 56,200

REMAINING COSTS (Cont)

	B/Fw	£ 56,200
Crown Stays & Nuts		£ 5,100
Balance, Machining of Rods		£ 4,800
Return transport of boiler		£ 3,000
Superheater elements		<u>£ 2,000</u>
Total		<u>£71,100</u>

4253 AGM Report *continued*

Source of Funding

Funds Held	£22,470
Debtors	£ 7,600
VAT Refund owed	£ 940
Project	£12,500
50% of S/O receipts for H1	<u>£ 6,500</u>
Total	<u>£50,010</u>

SHORTFALL

Amount left to find

£21,100

2022 produced issues that affected us both directly in respect of the boiler and indirectly as a result of global events.

2022 ISSUES - DIRECT

**TWO FURTHER AREAS OF THE BOILER REQUIRED
REPAIR WORK TO BE CARRIED OUT**

CROWN SHEET UNDER THE WHISTLE MOUNTING

**SECTION OF BARREL ABOVE THE SIDE
DOUBLING PLATE**

2022 ISSUES - INDIRECT

RISING ENERGY PRICES

FURTHER IMPACTED BY INVASION OF UKRAINE

RISING INTEREST RATES

**HIGHEST COST OF LIVING INCREASE SEEN
FOR OVER A GENERATION**

The former resulted in a finite cost increase but the latter affected both income and expenditure and continues to do so.

IMPACT ON US

INCREASE IN MATERIAL COSTS

INCREASE IN LABOUR RATES FOR BOILER WORK

**FUNDRAISING BECAME MORE DIFFICULT AS
FINANCIAL BELTS WERE TIGHTENED**

The sale of 85 new shares will cover the shortfall or, failing that, we will have to borrow against future steaming fees to maintain the rate of progress – something we do not want to do and will be a last resort. Since the appeal at the AGM we have received applications for 19 shares, so we are already more than a quarter of the way there and, with your help, will soon raise the remainder. The quicker the money rolls in, the quicker 4253 will be rolling on the rails under her own power.

4253 Tubing a boiler

So, just how do you tube a boiler?

After reading our last newsletter of 2022, an avid reader sent in the title question to us. It seems only fitting that we answer this now, with 4253's tubes currently stored with HBSS in Liverpool waiting for installation.



So how do you get these 235, yes you read it correctly, 235 small and 14 large, 11-foot-long tubes into the 'closed' boiler, so that they emerge from both the firebox end and the tube plate end of the boiler?



The tube layout in 4253's boiler. The larger tubes (1-14) are the superheater tubes. Superheater tubes convert 'wet' steam to 'dry' steam which produces more power.

4253 Tubing a boiler *continued*

Well, you start at the bottom. The first tube is inserted through the tube plate and it's then slid along the barrel, until it is picked up at the firebox end by someone in the firebox, using a length of (soft metal pipe/bar/wood), to guide the end into its hole.

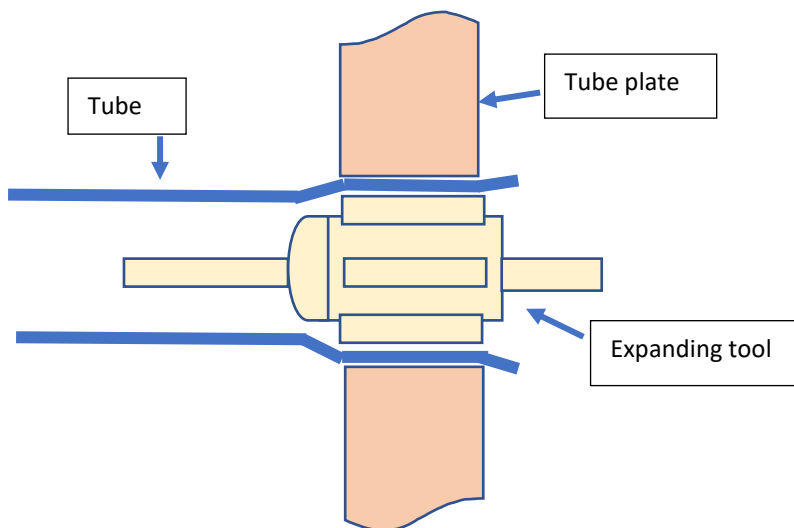
This is repeated along the lowest row and then continued for each higher row, using the now fitted row beneath as a platform to slide the following tubes along.

The harder bit is sliding the much heavier and wider superheater tubes along and engaging them into the holes in the firebox. This is because those holes are threaded, so the tube end not only has to be lifted to the right height but also rotated to engage the thread. The firebox end of these tubes is also of a smaller diameter than the rest, so that the threaded portion can be passed through the front tube plate with a degree of clearance to avoid damage - imagine the tube as a very long bottle shape.



As you can see from the diagram on the previous page; after the first row of larger tubes are fitted (8 to 14), there is a bunch of small tubes to be fitted before the remaining larger tubes (1 to 7) go in.

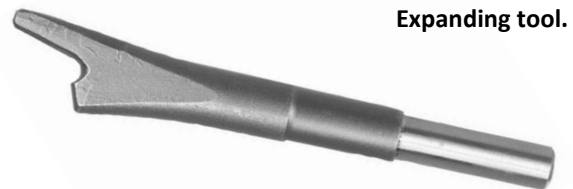
Once all the tubes are in position, each one is secured by 'expanding'. This is done using a tool that when turned, expands the tube out against the holes in the tube plate or firebox, making for a tight seal.



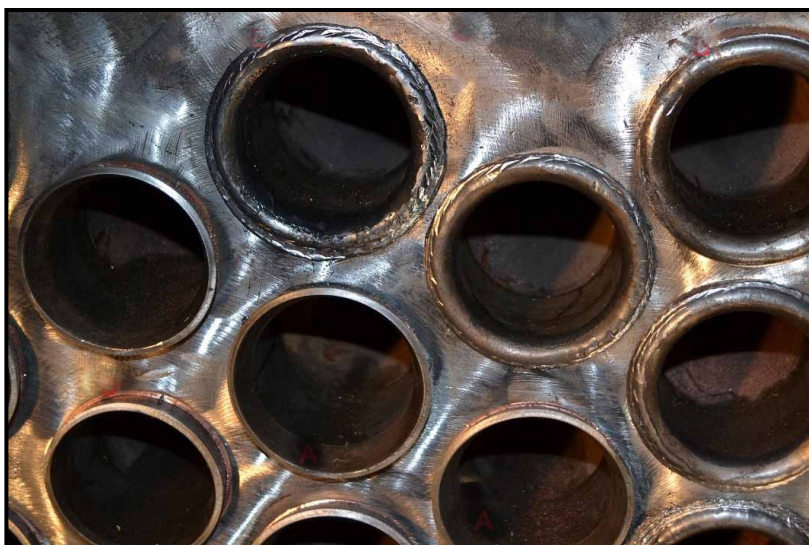
The final operation is to 'bead' over the ends of each smaller tube. This essentially bends over the 1/4" of protruding tube back on to the tubeplate to prevent tubes burning out and to make a further watertight seal (see picture below). The beading tool is used on the end of a pneumatic hammer.



Expanding tool.



Beading tool.



Tubes expanded (bottom left) and beaded over (top right).

***The 'bite size' introduction to All That Brass (part 2)
will continue in the next newsletter***

4253 The big lift!



Preparations to lift the first of the four items - the chimney.



Liam looks relieved it's safely down in one piece!

4253 The big lift! *continued*



The cab in its new home for the next few months.

Note that the hole for the boiler to go through (between the two windows) is yet to be cut out.



K&ESR apprentice George Moffatt assisting with the lift. His grandfather Richard Moffatt (with white hard hat in the background), directs operations.



4253 Mike Pearson



We are very sad to announce the death of a close and long-time supporter of 4253, Mike Pearson.

A former Mayor of Tenterden, Mike also proved to be an excellent engineer. Over many years he made numerous parts for 4253 from his home workshop, helping to keep our costs down. He was also a strong supporter of our fundraising activities and was invariably in attendance at many events, helping to promote and raise money for the project.

Mike will be sorely missed by all at 4253.

A gentle reminder to all shareholders:

Can you please let us know of any changes to your telephone number, address or email address, so that we can keep our mailing database up to date.

4253 Locomotive Company never shares any information with any other third parties.

It is important to us that we remain in contact with all our shareholders and that our mailing database is accurate.

Email: gwr4253news@gmail.com

If you haven't told us about your new email address - then you are probably not reading this!

Help get us 'Back On Track'!

With the boiler needing final completion,
we desperately need your continued help . . .

**TO KEEP THE PROJECT 'ON TRACK'
AND TO ENABLE US TO GET THESE VITAL
ITEMS FITTED TO THE LOCO.**

At the end of this newsletter 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 thank all shareholders for their
continued fantastic support with this
historic restoration project.*

Thank you.

**To make things easier, we have put all
the options on our website.**

Please go to:

www.4253.co.uk/how-to-help/

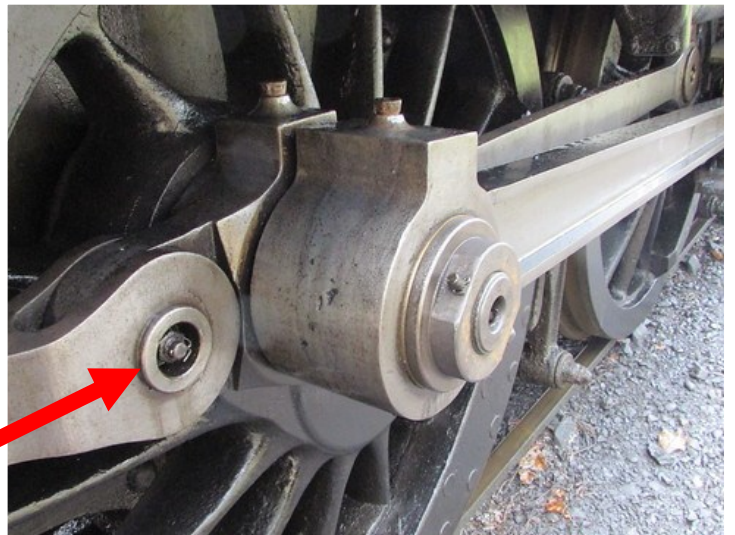
4253 Gradient Pins



Above shows our brand new gradient pins, together with corresponding bearings and caps, ready to be fitted to 4253 - one is larger than the other.

These items are currently away being case hardened. Once they are returned and tolerances adjusted, we'll then have all the elements necessary to assemble the rods on the loco.

The arrow shows the gradient pins and bearings in place on another loco.



What are gradient pins, you might well ask?

Seen in the picture above, they are extremely important pins that connect the side rods together. There are four gradient pins on 4253, two for each side. The lower of the two pictures shows the pins in position, with the bearings in place and the pins holding the whole thing together. The heads of the pins, which are on the inside towards the wheel, fit flush with the inner rod face to leave clearance between it and the wheel.

Don't forget our website and online shop!

We're always open - 24/7 at:

www.4253.co.uk

Find out how you can help with buying
Shares, Stays, Mugs, Plugs,
Donations and much more!

Also, see past Newsletters and the
weekly Facebook progress reports . . .

it's all there, just go to our website and
support *YOUR* locomotive restoration.



4253 at K&ESR Santa Specials

As you can see from the picture below, we were out in force for the annual Kent & East Sussex Railway Santa Specials in December. Our large marquee on Tenterden Station platform raised much needed money, together with raising the profile of the 4253 project.

Over a number of weekends leading up to Christmas, volunteers were out in all weathers (including a snow storm!) manning our stall, which included our usual tombola together with a large range of 4253 merchandise. The always-popular tombola had a steady stream of punters queuing up in the cold, hoping to win one of the many super prizes on offer!



Just a small selection of many volunteers that worked on our Santa stall, raising funds for the project.

From left to right: Kelvin (*keeping a low profile*), Marlene and Janet on the tombola, Graham, Dave, Scott (*the quiet one*) with Colin and Paul this end. We did have heaters in the marquee which helped fend off the cold.

A great big THANK YOU to everyone who helped with our fund raising events throughout 2022.

If you can help out on our sales and tombola stand for any of our forthcoming events in 2023, please send us an email.

You don't even have to do a full day if you don't want to!

Email: events@4253.co.uk

Come and join the 4253 friendly Sales and Tombola Team!

We are looking for a volunteer Events Co-Ordinator to run our fund raising events for this year.

This entails taking charge of approximately 9 events throughout the year, culminating in the K&ESR Santa Specials.

You would not be alone! We have teams of experienced 4253 volunteers always eager to help with setting up and packing away after events.

It just needs someone in overall charge with an oversight of what's happening and who's doing what.

If you fancy joining our 4253 team, which includes free entry to a host of premier steam and classic events, please let us know.

Email Charlie: fog49@live.co.uk

4253 Meet our new Company Secretary



**At the AGM in January,
Neil White was unanimously
voted in as the new
4253 Company Secretary.**

Neil is a long-standing shareholder together with being a hands-on volunteer over many years. Neil was voted in after the retirement of Bryan Atkins who had been the Company Secretary since the inception of the project.

Neil brings with him a wealth of experience and organisational abilities and we wish him well in his new volunteer role.

**Neil can be contacted via:
gwr4253@gmail.com**

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
Old Chilmington Oast, Chilmington Green, Ashford, Kent TN23 3DP

November 2022

Tube plate trial fitting and crown stays

We are pleased to report that things are still moving forward at HBSS in Liverpool.

The main steam collector, main steam pipe, water trays and other bits and pieces are now safely installed inside the boiler. The next stage is to fit the tube plate into the end of the boiler with a trial fitting having taken place last Friday. If all is well, the tube plate can be riveted in place with *'just'* the 235 tubes to install!

New superheater flues have been ordered from Steam Engine Tubes, Shropshire. As soon as the new flues are complete they will be dispatched to HBSS for fitting to the boiler. The superheater elements are being manufactured at Tyseley Loco works and will be sent to Rolvenden for fitting by us at a later date, when the boiler returns.

As you can see from the picture below, the tube plate trial fitting looks to be successful!



A very good shot of the new tube plate which will be riveted into the end of the boiler. All the (235 + 14 large) holes this end, correspond to holes in the firebox end to carry the hot gases through the boiler water to produce steam.

The 14 larger holes are the ones that carry the superheater flues and elements which convert the wet steam from the boiler into dry steam for the cylinders. The superheated steam then has atomised oil mixed with it on its way to the cylinders, for lubrication.

The brand new tube plate seen here, was manufactured for 4253 by the South Devon Railway some years ago and has been patiently awaiting its turn for reassembly.

4253 Boiler Report *continued*

Even the Grim Reaper is helping out with the boiler at HBSS . . .
it's a shame he wasn't reaming — we could have called him the Grim Reamer!



This ghostly apparition at HBSS is putting threads into the crown stay holes. Crown stays go between the top of the boiler to the top of the firebox and maintain the strength in this extremely hot area. You can just see, over the ghost's left shoulder, the new patch that had to be welded in under the whistle area — the boiler is laying on its side at the moment for ease of access.

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.

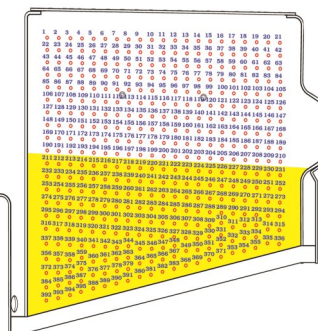
The Layman's Guide to Boiler Stays

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.

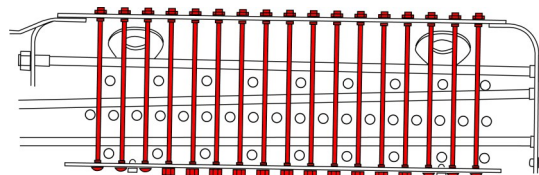
The stays are braced between the two in all these areas, strategically providing rigidity and flexibility to what is essentially a massive pressure vessel. The material used is in accordance with the relevant stress design criteria. They are basically screwed into position and riveted over to finish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

Outwardly they have a neat and innocent looking domed appearance - inwardly they present a structural forest. About 70% of the 4253 firebox stays are to be renewed and installed by our contractors at HBSS, Liverpool - all we have to do is supply them! *That's where you come in!*



Firebox wrappers

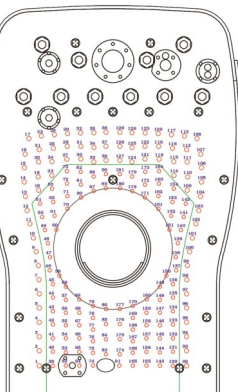
A combination of copper and rigid steel stays. We are renewing all throatplate stays, backhead stays, crown stays and a percentage of the side wrapper plate stays. The stays within the



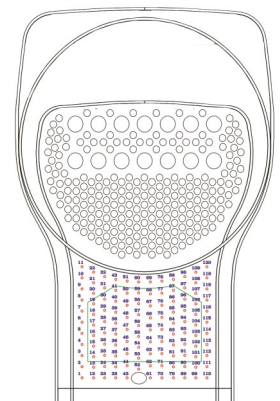
Cross section of firebox
Side view showing crown stays and nuts (in red). 174 stays are required to

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. Two or more sets can be sponsored by Standing Order, spread over 6 months. Alternatively, you can sponsor individual stays.



	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 a footplate ride on GWR 4253 on the earliest available date after launch into service.

Please visit www.4253.co.uk for further information and online payment details.

If you wish to set up a bank Standing Order, please print the form and post to the address shown.

Please help get YOUR boiler back into steam!



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 with 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, Old Chilmington Oast, Chilmington Green, Ashford, Kent TN23 3DP