

# THE MIKADO MESSENGER



2007 PRINCE OF WALES  
Building Britain's Most Powerful Steam Locomotive



An unclad No. 2007 *Prince of Wales* - A1SLT

Welcome to edition No. 58 of The Mikado Messenger, our monthly eNewsletter which aims to provide a regular progress update on the construction of new Gresley class No. 2007 Prince of Wales.

It has been a very busy month for No. 2007 *Prince of Wales* as the cladding and its jig have been removed so that the motion brackets and leading boiler support can be fitted and to provide access for pipework to be fitted. Work on the tender is progressing at a good pace with the frames and base plate at I D Howitt, at Crofton, and the wheelsets at South Devon Railway.

For more information on how you can help to build Britain's most powerful steam locomotive visit [www.p2steam.com](http://www.p2steam.com), email [enquiries@p2steam.com](mailto:enquiries@p2steam.com) or call 01325 460163.

## FUNDRAISING

A P2 for the price of a pint of beer a week: over 930 supporters have signed up as Covenantors for No. 2007 *Prince of Wales* from as little at £2.50 per week and now kindly donating over £205,000 annually including Gift Aid. We aim to reach 1,000 regular donors by the end of the summer. If you haven't yet signed up as a Covenantor we would encourage you to get on-board. You can find more information

[here.](#)

**The Motion Club** has now welcomed around 145 members, with only 30 members remaining of our 175 members target. You can find more information about The Motion Club [here](#) - help us to fund the manufacture of No. 2007's motion!

**The Boiler Club** has hit the 180 members mark, leaving just 120 spaces available. As we have now placed our order for the boiler, we would urge those who haven't yet contributed towards the purchase of No. 2007 *Prince of Wales*' boiler to join us. This is the single most expensive component on the locomotive and is due to be delivered to Darlington Locomotive Works in July 2021. More information about The Boiler Club can be found [here](#).

Our newest club, **The Tender Club**, is starting to fill up with 33 places already taken. In order to keep on schedule to complete No. 2007 within three years, we need to have the tender frames and tender tank delivered to Darlington Locomotive Works in 2019. ID Howitt Limited is currently manufacturing the tender frames and is making good progress. Given the traditional generosity of our supporters, we have confidently placed the order for the manufacture of the tender tank with North View Engineering Solutions of Darlington. Our target for The Tender Club is 250 members, contributing £1,500, so if you would love to contribute towards the tender more information can be found [here](#).

You can sponsor No. 2007 *Prince of Wales* components from as little as £25 ranging up to £15,000! The **Dedicated Donations** scheme has already raised around £350,000. If you would like to sponsor a component, please email [dedicated.donations@p2steam.com](mailto:dedicated.donations@p2steam.com), detailing the amount you would like to donate and/or if you had a specific part of the engine in mind, we will then send you some component recommendations to suit your donation.

To-date, over £2m has been spent, £2.6m raised and £3.3m pledged of the required £5m to complete No. 2007 *Prince of Wales* within the next three years.

## ENGINE FRAMES UPDATE



No. 2007's cladding and jig being removed by Ian Matthews - *Bob Hughes/A1SLT*

**Summary:** engine's frames erected; all frame stays, brackets, horn blocks, axle boxes & buffers cast and fitted using around 1,000 driven bolts.

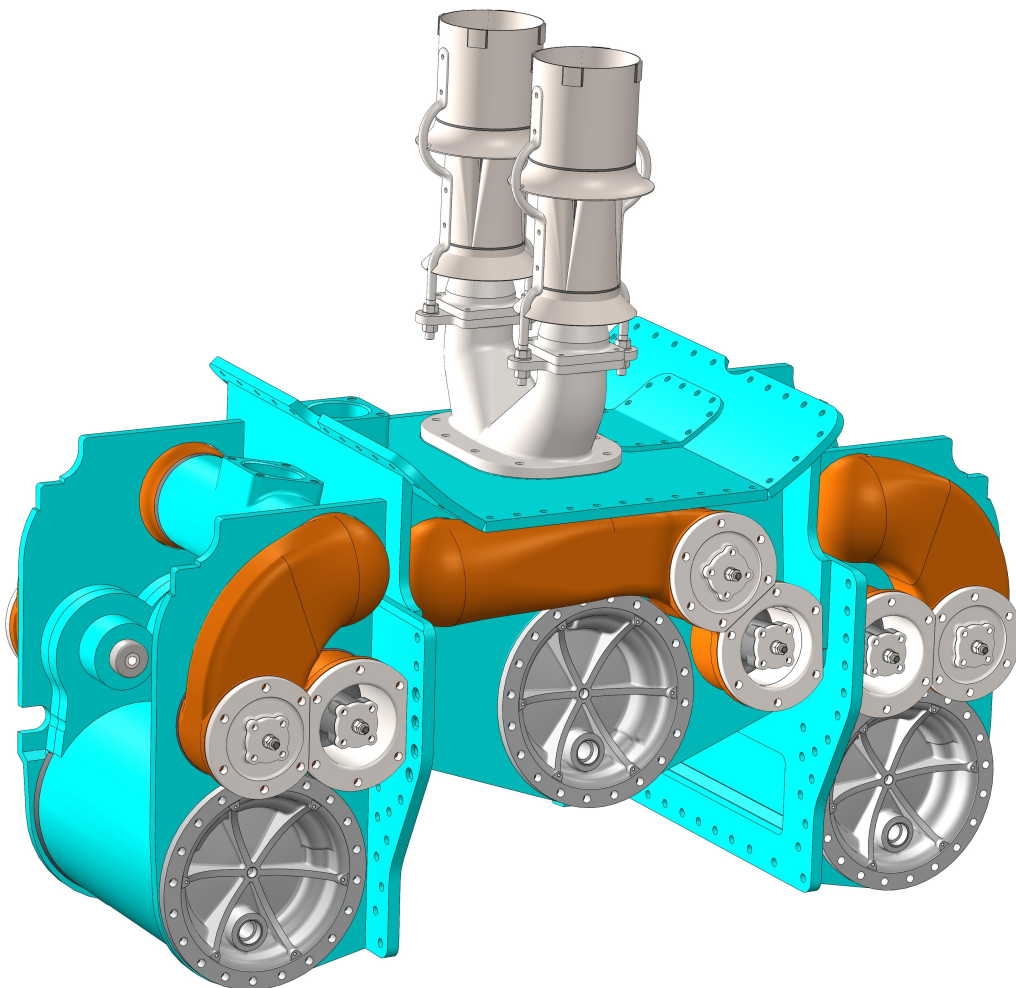
**Progress update:** the left-hand motion bracket has been delivered by North View Engineering Solutions (NVES) and they have made good progress with the 10 spring brackets. The fabricated spring brackets are being stress relieved prior to finish machining. The fitting of the handrails to the cab has been completed. The rest of the handrails and cladding have been removed from the frames and the cladding is having protective paintwork applied prior to storage in a container until the boiler arrives. With the cladding off the frames, the two air pumps have been trial fitted to facilitate routing of pipework.

**Next steps:** as soon as the left hand motion bracket is received it will be mounted on the frames and, along with the right-hand bracket and leading boiler support, will be permanently bolted to the frames.

**Fundraising:** The Founders Club was established in September 2013 to give the project a racing start and get it to the point of erecting the engine's frames with a target of raising £100,000 plus Gift Aid from 100 supporters each donating £1,000. The Founders Club closed in July 2014 having attracted 360 members and raised around £450,000.

## CYLINDERS UPDATE





Recent CAD image of the fabricated cylinder block showing cylinder and valve covers and the Kylchap exhaust system - *David Elliott/A1SLT*

**Summary:** design studies into cylinder block manufacture and selection of valve gear complete; 3D CAD design of the cylinder block and valve gear substantially complete.

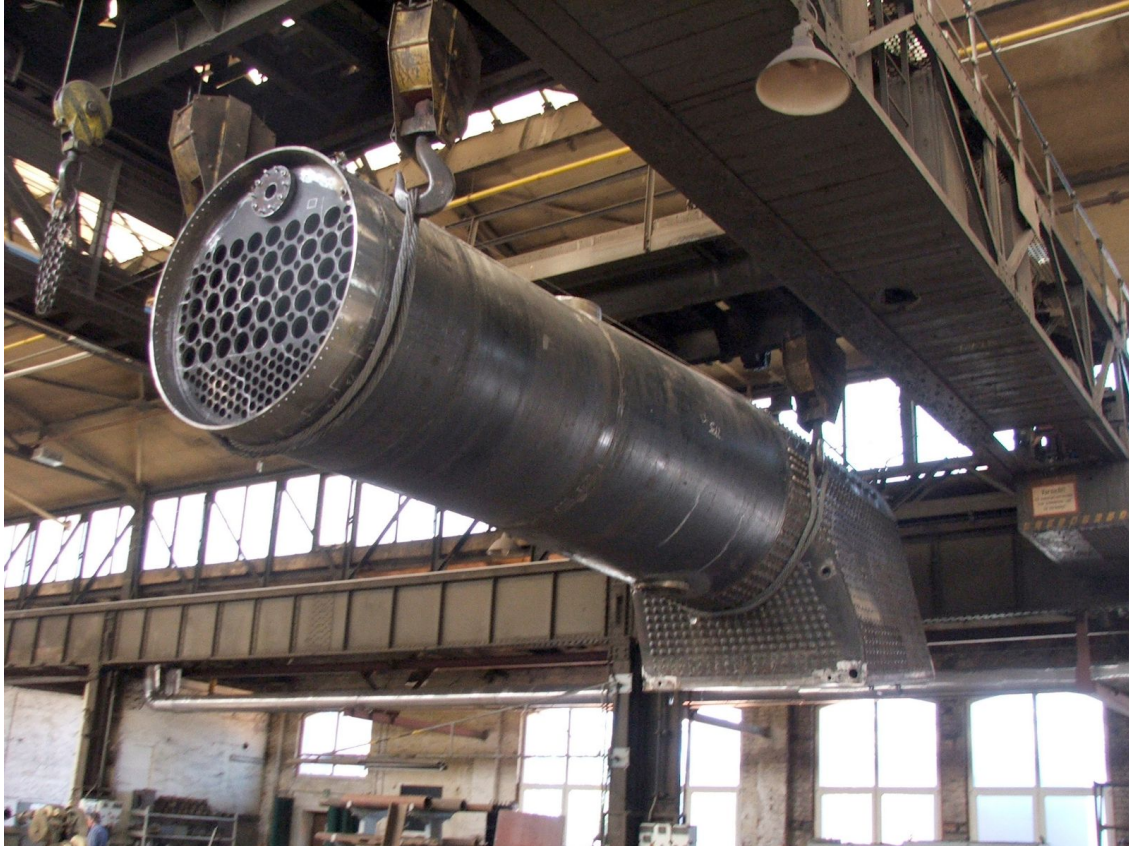
**Progress update:** we are currently seeking best and final offers for the cast steel steam passages for the cylinder block. David Elliott is continuing with detailing the welds on the cylinder block so that we can seek quotes. The cylinder steam chest cover patterns are being manufactured by pattern maker John Hazlehurst of Swineshead, Lincolnshire.

**Next steps:** completion of the cylinder block welds, manufacturing drawings of valves and valve gear details so that quotes can be obtained.

**Fundraising:** The Cylinder Club was founded in October 2017 to fund the redesign and manufacture of the cylinder block with a target of raising £100,000 plus Gift Aid from 100 supporters each donating £1,000. The Cylinder Club closed in March 2018 having achieved its target.

## BOILER UPDATE





No. 60163's boiler at DB Werk Meiningen, 2006 - *David Elliott/A1SLT*

**Summary:** boiler design study completed; forged foundation ring corners manufactured & machined; regulator castings delivered; superheater header cast & machined; Smoke box & fittings: smokebox assembled and trial fitted to the frames; chimney cast and fitted; boiler cladding manufactured and trial fitted to frames; boiler order placed with DB Meiningen for delivery in July 2021.

**Progress update:** following placing the order for the boiler, DB Meiningen has started detailing the updated design with input from the Trust.

**Next steps:** completion of the detailed design by Meiningen and dispatching regulator castings and forged foundation ring corners, from DLW, to Germany for incorporation into the new boiler.

**Fundraising:** The Boiler Club was founded in October 2017 to fund the design modification and manufacture of the boiler with a target of raising £600,000, plus Gift Aid, from 300 supporters each donating £2,000 in up to 40 payments of £50. As of today, The Boiler Club has attracted 180 members who have generously donated almost £450,000. For further information click [here](#) - we must reach our 300 members target by July 2021 at the latest.

## WHEELSETS UPDATE



The tender wheelsets being assembled at South Devon Railway Engineering - A1SLT

**Summary:** study into ride & suspension completed using Vampire® software; crank axle re-designed to comply with modern standards, approved and manufactured; all engine wheelsets complete and trial-fitted to engine; parts for tender wheelsets at South Devon Railway Engineering for assembly.

**Progress update:** SDR have started pressing the wheels onto the axles for the tender wheelsets; a full drawing set for the pony truck frame has been produced and checked.

**Next steps:** completion of the four tender wheelsets and requests for quotation for the pony truck frame.

**Fundraising:** The Mikado Club was founded in March 2016 to wheel the engine with an initial target of raising £200,000, plus Gift Aid, from 160 supporters each donating £1,000. This was extended in May 2017 to 200 supporters raising £250,000 plus Gift Aid in order to also wheel the tender. The Mikado Club closed in May 2018 having achieved its target.

## MOTION UPDATE





A middle coupling rod - *Robert Stephenson (Engineers) Ltd/A1SLT*

**Summary:** all heavy motion ordered from order with Robert Stephenson (Engineering) Ltd of Atherton, Manchester; work started with first delivery due in autumn; updated poppet valve gear design almost complete with first components in manufacture.

**Progress update:** Robert Stephenson (Engineering) Ltd are making good progress with forging the middle coupling rods.

**Next steps:** forging and machining quotes are being sought for valve gear return cranks.

**Fundraising:** The Motion Club was founded in May 2018 to fund forging and machining of the heavy motion, with a target of raising over £210,000 including Gift Aid, from 175 supporters each donating £1,000 in up to eight payments of £125. As of today, The Motion Club has attracted around 145



members who have generously donated over £175,000. For further information on how to become a member and help us to reach our target before the convention click [here](#).

## TENDER UPDATE



The tender frames at I D Howitt, at Crofton - A1SLT

**Summary:** axlebox and other tender castings produced by William Cook Cast Products; frames being assembled by ID Howitt at Crofton; tank construction under way by North View Engineering Solutions (NVES), in Darlington; parts for tender wheelsets delivered to South Devon Railway Engineering for assembly.

**Progress update:** Ian Howitt is in the process of trial-fitting the tender base plate to the frames. He is also machining and fitting the rubbing block which forms the buffer between the tender and the engine.

**Next steps:** on completion of trial-fitting the base plate to the tender frames, it will be returned to NVES to enable erection of the tank.

**Fundraising:** The Tender Club was launched in April 2019 to fund the construction the tender, with a target of raising £450,000, including Gift Aid, from 175 supporters each donating £1,500 in up to eight payments of £125. As of today, The Tender Club has already attracted 33 members who have generously donated almost £50,000. For further information on how to become a member click [here](#).

## MISCELLANEOUS FITTINGS



Handrails fitted to the cab, at DLW - A1SLT

### **Miscellaneous engine platework**

**Progress:** cab erected and cab side & spectacle window frames fitted; footplating & splasher kits fitted to frames; completed the cab seat cubicles.

**Progress update:** Alan Parkin has designed the installation for the mounting of the electrical control gear and TPWS units in the driver's seat cubicle; the handrails have been fitted to cab.

**Next steps:** to fit the stainless steel window catches to the cab spectacle windows.





A superheater header T bolt and nut, one of 50 sets, at DLW - A1SLT

## Fittings

**Summary:** many non-ferrous fittings are being cast and machined.

**Progress update:** Alan Parkin continues to produce 3D models of fittings to populate the backhead to enable us to model pipe runs to the fittings; Steve wood, a volunteer, has made a test rig to hydraulically test the cylinder drain cock castings; superheater element bolts and nuts have been received.

**Next steps:** the hydraulic testing of the cylinder drain cock castings and superheater header.



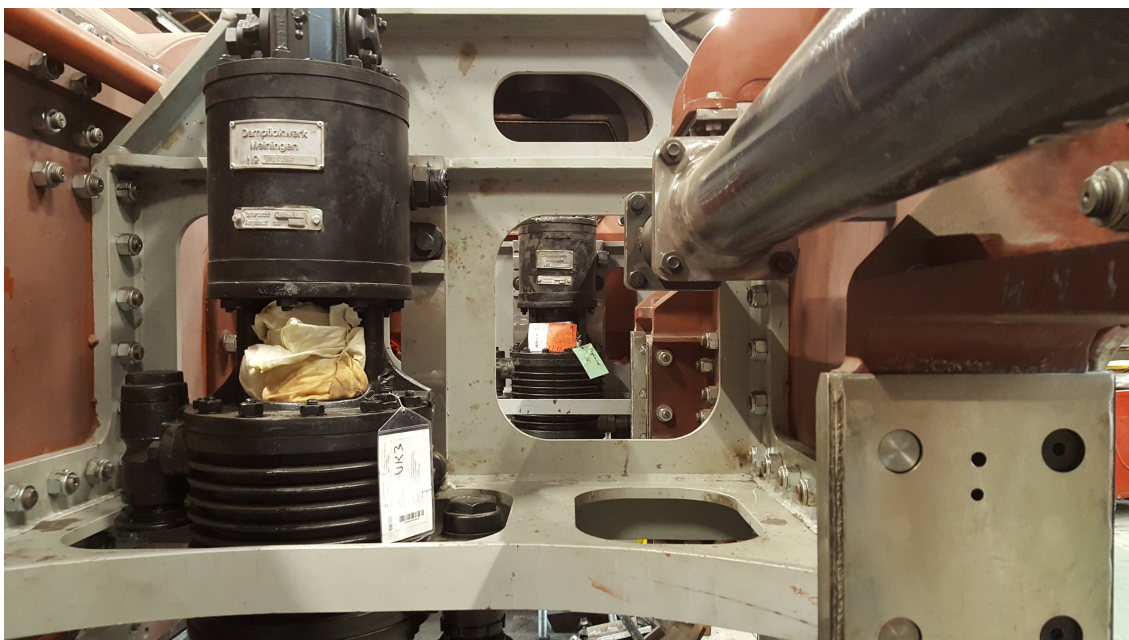


Castings of brake shaft bushes- A1SLT

## Brakes

**Summary:** work is well advanced on the manufacture of the brake rigging.

**Progress update:** the brake blocks for the engine and tender have been ordered.



Ian Matthews has fitted the two air pumps inside the frames - *Ian Matthews/A1SLT*

## Pipework

**Summary:** the design is well advanced and installation under way.

**Progress update:** Ian Matthews has continued with the vacuum pipework and is presently installing the DV2 air/vacuum proportional valve and its associated isolating valve. Alan Parkin has routed the air

brake and reservoir pipework through the length of the engine frames.

**Next steps:** to prepare a detailed list of copper pipework and fittings leading to requests for quotation.



Ian Matthews has fabricated the two battery boxes, with integral cable ducting, from stainless steel -

*Ian Matthews/A1SLT*

## Electricals

**Summary:** significant progress on design and manufacture of electrical system; belt driven tender alternator nearing completion, turbine wheel for steam turbo alternator manufactured.

**Progress update:** Alan Parkin continues to detail the electrical trunking installation, in particular the boxes which carry the sockets for the engine/tender umbilicals.

**Next steps:** we expect to be in receipt of the final externally sourced parts for the belt driven alternator shortly which will permit assembly and testing.

## Fundraising

The Dedicated Donations scheme was founded to fund numerous components including the non-ferrous fittings and has raised around £350,000 to-date with new parts being frequently made available for sponsorship. For further information click [here](#).

# 2019 ANNUAL CONVENTION

Our Annual Convention is on Saturday 12th October 2019 and will be held at the Mercure Darlington Kings Hotel for both the morning presentations and the evening dinner. Supporters, and their guests, will also have the opportunity to visit Darlington Locomotive Works to see the progress of No. 2007 Prince of Wales, with David Elliott conducting a guided tour. Invitations, with the full details, have been sent out. If you have not received yours or would like further details please call the office on 01325 460163 or email [leigh.taylor@p2steam.com](mailto:leigh.taylor@p2steam.com)





Progress on No. 2007 *Prince of Wales* - Mandy Grant/A1SLT

## AN AUDIENCE WITH THE *PRINCE OF WALES*

Following on from the success of our 2018 Roadshow programme, we will be continuing the Roadshows in 2019. We will be holding a series of presentations on the project to build new Gresley class P2 No. 2007 *Prince of Wales*. Each presentation will feature key team members including Mark Allatt and/or David Elliott and will cover the background to the project, progress to-date, future plans and details of how to get involved. We would encourage you to attend one of these Roadshows and bring along some friends and family members who would be interested in hearing about the project. The two hour presentation will start promptly at 11:00hrs and run until 13:00hrs on each of the days listed below and are open to existing supporters and interested members of the public:

### NEW 2019 ROADSHOW PROGRAMME

- Saturday 14<sup>th</sup> September 2019 - Hilton Hotel, Leeds
- Saturday 2<sup>nd</sup> November 2019 - Darlington Locomotive Works, Darlington
- Saturday 7<sup>th</sup> December 2019 - Pendulum Hotel (Manchester Conference Centre), Manchester.

For more information on the P2 Roadshows visit [www.p2steam.com](http://www.p2steam.com), email [enquiries@p2steam.com](mailto:enquiries@p2steam.com) or call 01325 460163.

## OPEN DAYS AT DARLINGTON

We hold public open days at Darlington Locomotive Works on the first and third Saturday of every month from 11:00hrs to 16:00hrs.

- Saturday 17<sup>th</sup> August
- Saturday 7<sup>th</sup> September
- Saturday 21<sup>st</sup> September

Come and see the progress of No. 2007 *Prince of Wales* for yourself!



## PRESENTATIONS

If any railway society, or indeed other interested groups, would like a presentation on the project they can contact us by emailing [enquiries@p2steam.com](mailto:enquiries@p2steam.com)

## EASYFUNDRAISING

Users of Easyfundraising to support the Trust should please note that the relationship with Amazon is changing. Rather than Amazon donating via Easyfundraising, they will now do so via their own Amazon Smile process. The A1 Steam Locomotive Trust is registered as a charity with Amazon Smile so please ensure that next time you use Amazon, you opt to join Amazon Smile and select the Trust to benefit from anything that you buy.

For anyone who doesn't use Easyfundraising but does use Amazon, please help by selecting the Trust. Just type "The A1 Steam Locomotive Trust" into the search box the click to select when it is displayed as the result.

Please contact us at [enquiries@a1steam.com](mailto:enquiries@a1steam.com) if you have any problems.

## VOLUNTEER

As ever, we are looking for more volunteers. It takes a lot of people to both keep *Tornado* on the main line and also to build *Prince of Wales*. There is always so much more that we can achieve with the right volunteers, with the right skills and can-do attitude. We are currently looking for more volunteers to join the Open Days team at Darlington Locomotive Works. If you have a passion for raising money or engineering please do get in contact. For more information, please [email us](#).

## TRAVEL WITH *TORNADO*



No. 60163 *Tornado* crossing the Forth Bridge on her Aberdonian duties - Geoff Griffiths/A1SLT

For more information on *Tornado's* 2019 Raitour programme tours click [here](#) or call Tornado Raitours on 01325 488215.

The Trust respectfully requests that anyone wishing to see *Tornado* follows the rules of the railway and only goes where permitted.



Facebook



Twitter



Website



Email

*Copyright © 2019 The A1 Steam Locomotive Trust, All rights reserved.*

**Our mailing address is:**

The A1 Steam Locomotive Trust, Darlington Locomotive Works, Hopetown Lane, Darlington. DL3 6RQ