

# THE MIKADO MESSENGER



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



No. 60503 *Lord President* (the 17:05 to King's Cross to Newcastle on 25 May 1958) - the late Ben Brooksbank/Wikimedia Commons

Welcome to edition No. 61 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*.

Interestingly, tomorrow (30<sup>th</sup> November) marks the 60<sup>th</sup> anniversary of the end of the first two former Gresley class P2 'Mikados' as Thompson class A2/2 'Pacifics' when No. 60503 *Lord President* and No. 60505 *Thane of Fife* were disposed of at Doncaster Works. All were gone by the end of July 1961.

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: around 930 supporters have signed up as Covenantors for No. 2007 *Prince of Wales* from as little at £2.50 per week and are now kindly donating over £205,000

annually including Gift Aid. We aim to reach 1,000 regular donors by the end of the 2020. 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 156 members, with only 19 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 181 members mark, leaving just 119 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 45 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. 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 £400,000. 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 £2.1m has been spent, £2.7m raised and £3.4m pledged of the required £5m to complete No. 2007 *Prince of Wales* within the next three years.

## ENGINE FRAMES UPDATE



The combined spring brackets and frame stays have been delivered from North View Engineering Services- A1SLT

The LH slide bar bracket has been trial fitted to the frames - A1SLT

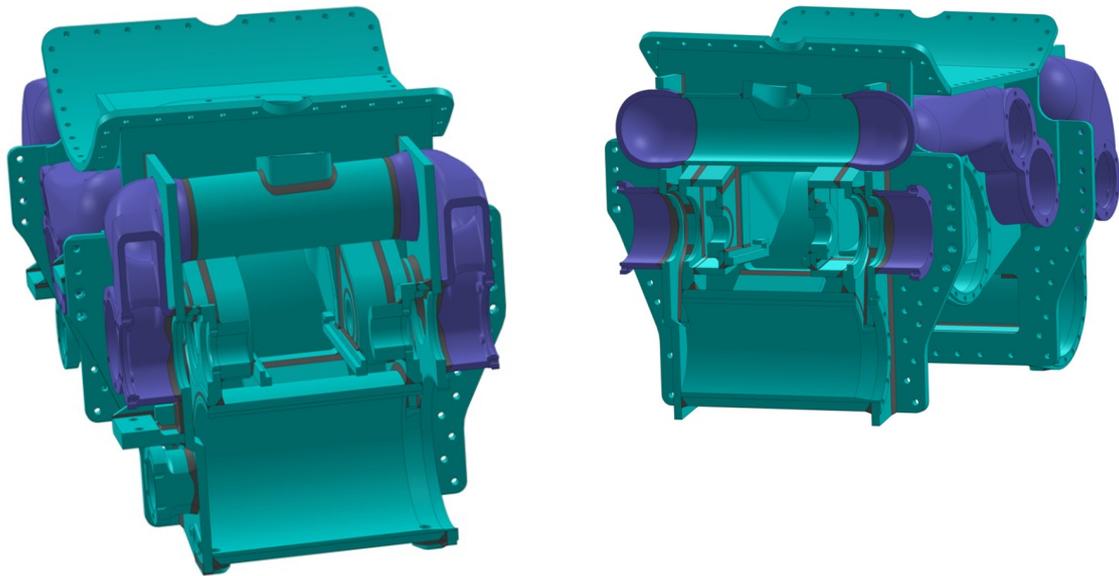
**Summary:** engine's frames erected; all frame stays, brackets, horn blocks, axle boxes & buffers cast and fitted using around 1,000 driven bolts.

**Progress update:** work is ongoing to finally fit the slide bar brackets and front boiler support .

**Next steps:** completion of fitting of all spring brackets and the slide bar brackets.

**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



The weld details have now been applied to the 3D CAD images of the fabricated cylinder block image -

*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 has completed the design welds on the cylinder block and quotes will be sought.

**Next steps:** completion of the manufacturing drawings of valves and valve gear details so that quotes can be obtained; quotes are also being sought for casting the steam chest covers.

**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



The flanged firebox throat plate and back plate - DB Meiningen/A1SLT

**Summary:** boiler design study completed; forged foundation ring corners manufactured & machined; regulator castings delivered; superheater header cast & machined; boiler cladding manufactured, trial fitted to frames and now in storage; boiler order placed with DB Meiningen for delivery in July 2022; foundation ring forgings and regulator castings despatched to Meiningen; the minor re-design of the banjo dome to suit the P2 cladding by has been completed by DB Meiningen.

**Progress update:** further detailed discussions with DB Meiningen on design issues including location of blow down valve between the frames instead of outside the frames as on *Tornado*.

**Next steps:** design review with DB Meiningen with a view to freezing the design.

**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 181 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 are being prepared for painting - *A1SLT*

The Catazzi spring planks have been machined by North Bay Engineering Services Ltd - *A1SLT*

**Summary:** study into ride & suspension completed using Vampire<sup>®</sup>; software; crank axle re-designed to comply with modern standards, approved and manufactured; all engine wheelsets complete and trial-fitted to engine; a full drawing set for the pony truck frame has been produced and checked.

**Progress update:** South Devon Railway Engineering (SDRE) has completed two tender wheelsets, including the rear wheelset which has a V-belt pulley for driving the tender alternator; all four completed wheelsets are being painted at DLW.

**Next steps:** the tender wheelsets will have their roller bearings fitted prior to being sent for balancing.

**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



The forged middle coupling rods at Stephenson (Engineering) Ltd - *Richard Pearson/A1SLT*

**Summary:** all heavy motion ordered from order with 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:** further forging is taking place of the remaining coupling rods at Stephenson (Engineering) Ltd.

**Next steps:** seeking forging and machining quotes for the valve gear return cranks; machining of the centre coupling rods.

**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 156 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**



No. 2007 *Prince of Wales'* tender tank taking shape - Richard Pearson/A1SLT

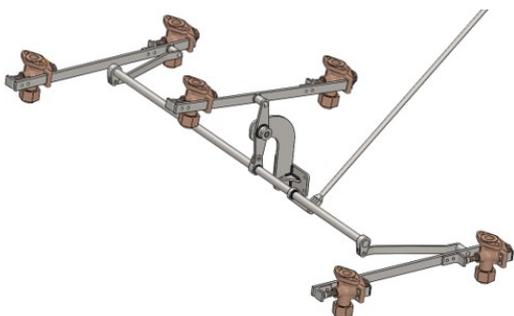
**Summary:** axlebox and other tender castings produced by William Cook Cast Products; frames being assembled by ID Howitt at Crofton; tank construction under way by North View Engineering Solutions (NVES), in Darlington; tender wheelsets assembled by SDRE and returned to DLW.

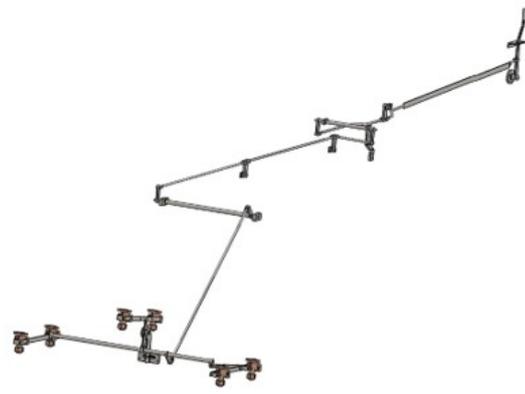
**Progress update:** having been trial fitted to the frames, the base plate has been returned to NVES who have made rapid progress in erecting the coal slope and washplates which prevent the water surging in the tender and potentially de-railing it.

**Next steps:** I D Howitt is making good progress with machining the tender horn blocks and the first pair have been trial fitted to the frames. The completed tender tank is expected to be delivered to DLW before Christmas which will enable Ian Matthews to fill and prime the sides and back.

**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 250 supporters each donating £1,500 in up to eight payments of £125. As of today, The Tender Club has already attracted 45 members who have generously donated almost £50,000. For further information on how to become a member click [here](#).

## MISCELLANEOUS FITTINGS





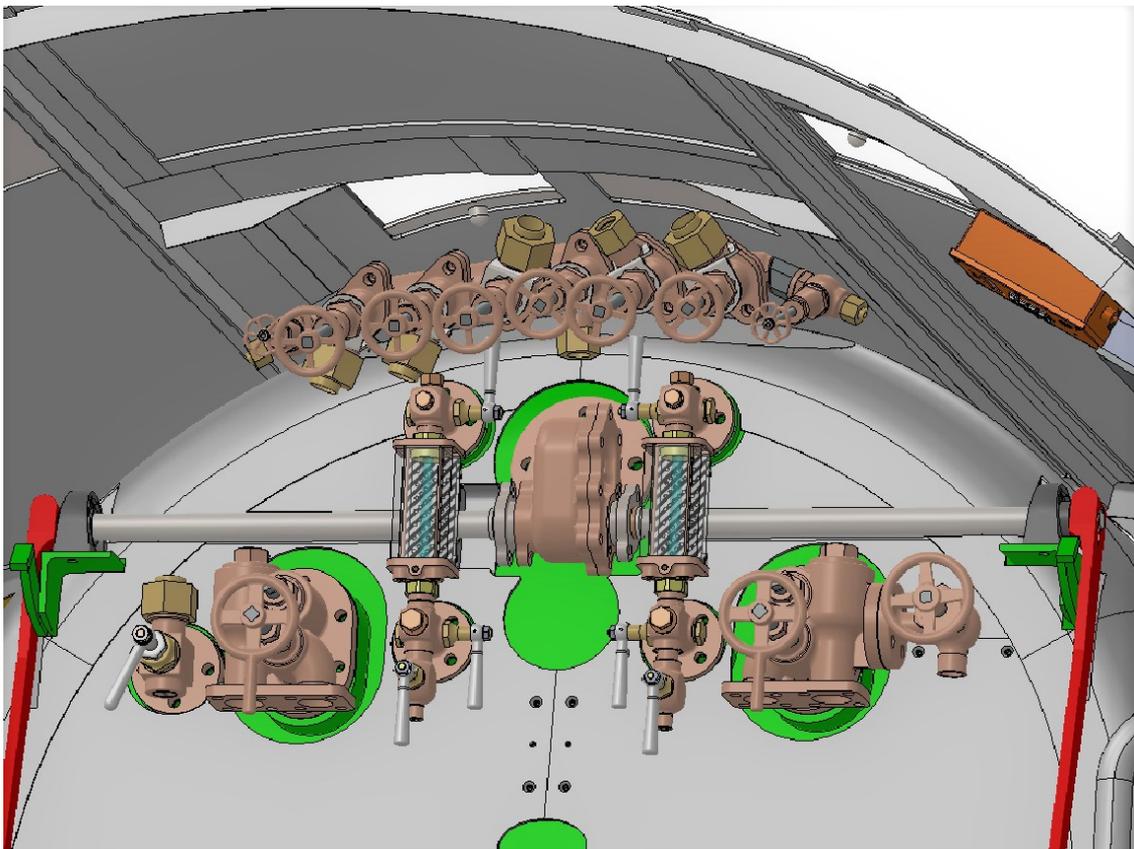
CAD images of the cylinder drain cock to cab lever mechanical linkage - *Alan Parkin/A1SLT*

## Running Gear

**Summary:** the conceptual design of the cylinder drain cock operating gear has been completed by Alan Parkin.

**Progress update:** 45 profiles have been ordered for the cylinder drain cock operating gear.

**Next steps:** producing manufacturing drawings and ordering of materials.



The steam stand pipework- *Alan Parkin/A1SLT*

## Pipework

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

**Progress update:** Alan Parkin continues to produce 3D design for the pipework, particularly around the steam stand in the cab.

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



CAD model of lamp and a prototype luminary - Rob Morland/A1SLT

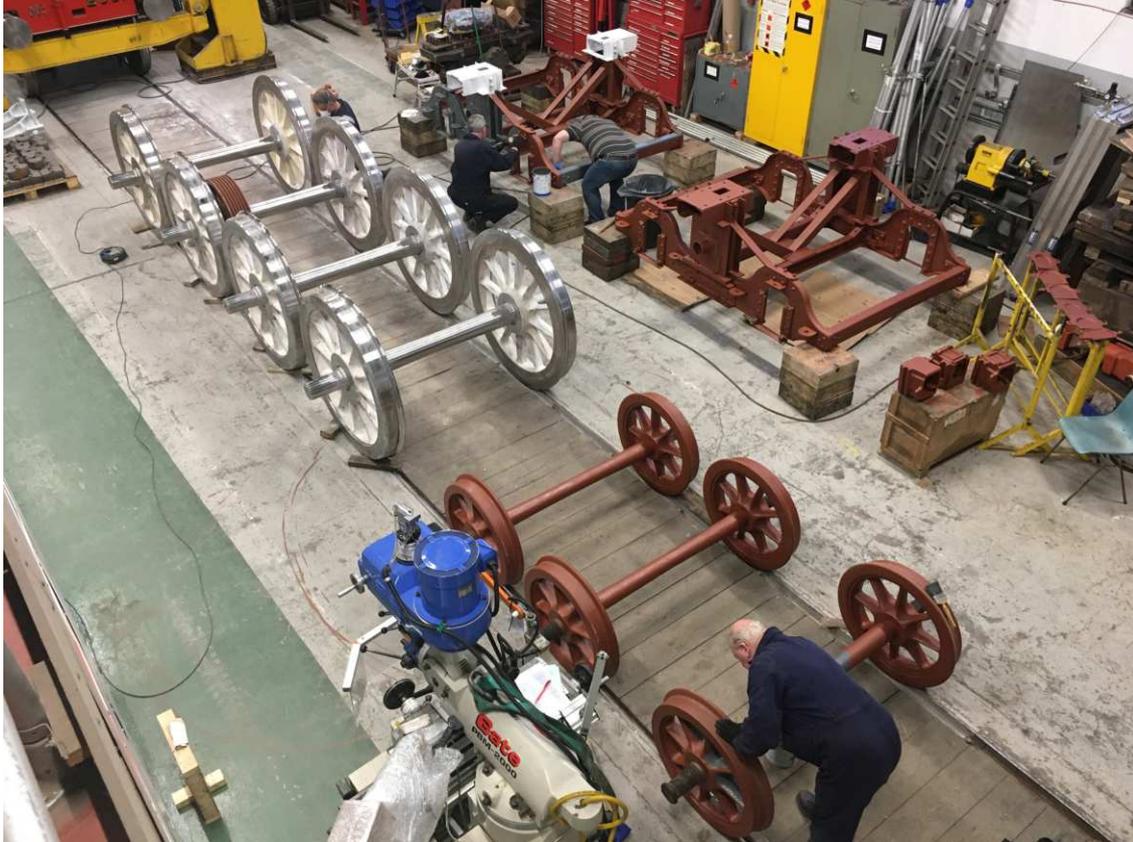
## Electricals

**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:** Rob Morland and Roger Millington have been developing an LED luminary to fit in the early LNER style oil head lamp casing; unlike Tornado who's prototype had electric marker lights, the new headlamps have to include white marker lights and red tail lamps in the same assembly; the design of the TPWS electrical safety system, under the cab seats, is reaching a conclusion.

**Next steps:** a major design review of the electrical system has been completed which will enable freezing of the design of several areas of the electrical system.





## Accommodation bogies

Whilst *Tornado* was based at Crewe Heritage Centre earlier this year, it came to David Elliott's attention that they were in the process of scrapping some old accommodation bogies. Accommodation bogies are typically used to support vehicles undergoing overhaul whilst their own bogies are being repaired. The Trust had been on the lookout for a set of bogies to support major components of steam locomotives for some time, and a pair of bogies from Crewe were bought for what is effectively their scrap value. Having brought them to DLW, they have been stripped, grit blasted and repaired ready for painting so they are ready for their first major role to carry the tender tank when it is delivered towards the end of this year. They will have a second lease of life.

On dismantling the wheelsets and axleboxes, several components have CLR stamped on them and one axle has 1920 stamped on it. This would suggest that the bogies are from very early Central London Line (now Central Line) tube carriages which makes them historically interesting in their own right.

## Fundraising

The Dedicated Donations scheme was founded to fund numerous components including the non-ferrous fittings and has raised around £400,000 to-date with new parts being frequently made available for sponsorship. For further information click [here](#).



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

## AN AUDIENCE WITH THE *PRINCE OF WALES*

### 2019 ROADSHOW PROGRAMME

The final Roadshow of 2019 will be held in Manchester

- Saturday 7<sup>th</sup> December 2019 - Pendulum Hotel (Manchester Conference Centre), Manchester, M1 3BB

Following on from the success of our 2018 and 2019 Roadshow programme, we are continuing the Roadshows in 2020 with 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 presentations 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 2020 ROADSHOW PROGRAMME

- 18<sup>th</sup> January - Darlington Locomotive Works
- 29<sup>th</sup> February - London Transport Museum, Covent Garden, London
- 21<sup>st</sup> March - Great Northern Hotel, Peterborough
- 18<sup>th</sup> April - Darlington Locomotive Works
- 16<sup>th</sup> May - Barrow Hill Roundhouse, Chesterfield\*
- 23<sup>rd</sup> May - Nene Valley Railway, Wansford\*
- 6<sup>th</sup> June - Hallmark Hotel, Carlisle \*
- 4<sup>th</sup> July - Darlington Locomotive Works
- 23<sup>rd</sup> July - Jurys Inn Aberdeen, Aberdeen \*

- 22<sup>nd</sup> August - Darlington Locomotive Works
- 3<sup>rd</sup> October - Darlington Locomotive Works
- 10<sup>th</sup> October - Great Northern Hotel, Peterborough
- 21<sup>st</sup> November - Darlington Locomotive Works

\* Please contact the office for timings.

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 7<sup>th</sup> December 2019
- Saturday 21<sup>st</sup> December 2019
- Saturday 4<sup>th</sup> January 2020
- Saturday 18<sup>th</sup> January 2020

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 fundraising or engineering please do get in contact. For more information, please [email us](#).

## TRAVEL WITH *TORNADO*



No.60163 *Tornado* in Blackpool, hauling 'The Illuminati', 2<sup>nd</sup> November - Warren Hannabuss/A1SLT

For more information on *Tornado's* 2019 and 2020 Raitour programme 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.



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**Our mailing address is:**

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