

# THE MIKADO MESSENGER



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

Welcome to edition No. 46 of *The Mikado Messenger*. The *Messenger* aims to provide a regular bulletin of news about the construction of No. 2007 *Prince of Wales*.

After all the excitement of *Tornado's* birthday party and getting *Prince of Wales* on its wheels the subsequent weeks were a bit quieter. Attention is now focussed of funding the larger motion parts through The Motion Club - you can find full details of how to help with this [here](#). Donations to the project have now passed £2.4m - almost 50% of the £5m needed to complete the locomotive in 2021 - and pledges towards building the locomotive are around £3.1m

Handwritten signature of Graham Langer.

Graham Langer  
Editor of *Mikado Messenger*

## NEWS BRIEFS

**ELECTRICAL EQUIPMENT ORDER CONFIRMED** - The Trust has agreed a £350,000 order for a state-of-the-art electrical system for No. 2007 *Prince of Wales*. The electrical system, based on that fitted to No. 60163 *Tornado*, includes systems that generate and store electricity, together with lighting and instrumentation systems. Also included are all current railway safety and communication systems, plus new systems that will soon be needed on the Network Rail main line. In order to complete No. 2007 *Prince of Wales* by 2021, the Trust needed start work on the electrical systems during the third quarter of 2018 and at its most recent board meeting, the Trustees reviewed the proposed system's architecture, key equipment locations, wiring & interconnect, power generation & supply, essential lamps, systems and instrumentation. You can read the full story [here](#).



**BALANCE WEIGHTS DELIVERED** - The balance weights have been delivered to Darlington Locomotive Works. Unlike *Tornado* they will be fitted to the wheels and then back-filled with metal to achieve the desired weight.



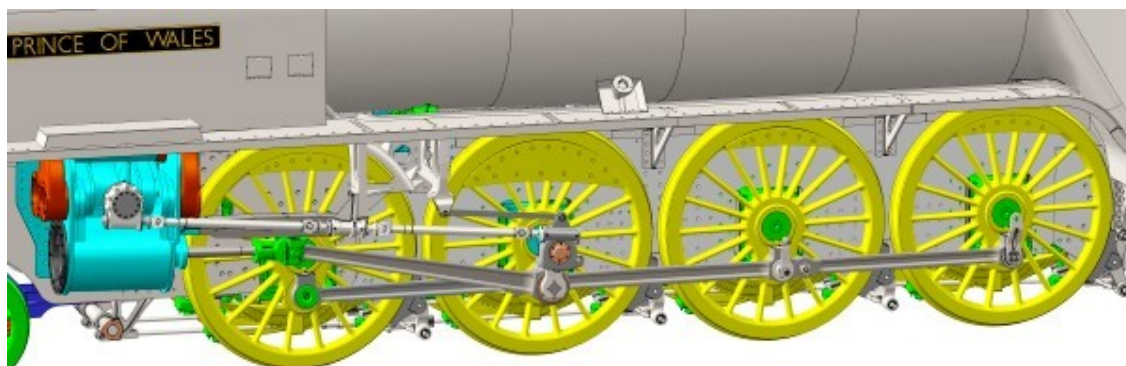
A pair of balance weights is machined at DLW - *Ian Matthews*

**DO THE LOCO-MOTION WITH US!** - The Motion Club has reached over £95,000 and the order for the heavy motion has been placed. The Club, which was launched in April 2018, has welcomed over a third of its 175-member target, with over 75 people already signed up. The Motion Club aims to raise £210,000, through 175 supporters each donating £1,000 (plus Gift Aid) in up to eight payments of £125, to manufacture the motion for No. 2007 *Prince of Wales*. If you haven't already joined The Motion Club, we would urge you to get on board, if you have any questions, please feel free to [email us](#), or call us on 01325 460163.

In order to complete No. 2007 by 2021, we needed to order the heavy motion this year. Thanks to the generosity of our supporters and the quick uptake of The Motion Club, we were confident enough to order the motion. The £181,000 order has been placed with Stephenson Engineering Ltd of Atherton, Manchester for the heavy motion. The order includes the forging, machining and heat treatment of the

nine heavy motion rods - intermediate coupling rod LH/RH, trailing coupling rod LH/RH, leading coupling rod LH/RH, outside connecting rod LH/RH and the inside connecting rod assembly (including strap, gluts and strap nuts and washers) - and the combined piston and rod.

The motion is expected to be delivered in batches between December 2018 and December 2019, with the first item, the intermediate coupling rods, expected to be delivered towards the end of December 2018. Orders to follow for the motion include rod bushes, oil box covers and miscellaneous components. You can find links to The Motion Club Leaflet and how to donate on The Motion Club [page](#).



The Lentz/Franklin valve gear drawn in CAD - *David Elliott*

## PROGRESS TO DATE

- Frame plates for engine and tender rolled and profiled; engine's frames erected at Darlington Locomotive Works; all major engine frame stays, brackets, horn blocks, axle boxes and buffers cast (44 in total); over 1,000 fitted and driven bolts ordered and delivered, approximately 800 now fitted to the frames
- All 20 wheels for engine and tender cast and proof machined; roller bearings for all engine and tender wheelsets and engine axles (including crank axle), tyres and crank pins delivered, tender axles ordered, tyres delivered and first wheelsets complete. Wheels fitted to axles, tyres and crankpins fitted to wheels at South Devon Railway Engineering, wheels delivered to Darlington, locomotive lifted onto wheels.
- Preliminary discussions held with boiler manufacturers and forged foundation ring corners manufactured and machined; start made on boiler fittings with castings for combined injector steam and delivery valves
- Study into ride and suspension completed using rail industry standard Vampire® software; finite Element Analysis completed on re-designed crank axle to ensure locomotive complies with modern standards; assessment and notified body appointed to oversee certification - first site visit made
- Cab erected and cab side window frames fitted; engine footplating and splasher kits delivered and permanently fitted to frames
- Smokebox door pressed details made and door completed, door frame manufactured, smokebox delivered and erected; chimney cast and fitted
- Crosshead castings received
- Boiler cladding assembly jig built, cladding crinolines and hoops rolled and fitted to jig, cladding sheets procured, rolled and fitted to the jig, whole assembly lifted into place on the locomotive and painted with primer.
- The boiler tender has been issued and expressions of interest have already been received.
- Tender frame construction under way, axlebox and other tender castings ordered from William Cook Cast Products
- Nameplates and chime whistle delivered
- Over £2m spent, £2.4m donated and £3.1m pledged of the required £5m.

## FUNDRAISING

**£2m spent and £2.4m donated of £5m target** - Our project to build Gresley class P2 No. 2007 *Prince of Wales* continues to make solid progress on all fronts and we are still on target to complete the new locomotive by 2021 provided we can keep up the current pace of income growth. A huge thank you to all our supporters who continue to give most generously to the project.

Pledges towards building No. 2007 *Prince of Wales* have passed £3m just four years after the frames were rolled at British Steel's plant in Scunthorpe. Public interest in seeing a new Gresley class P2 become a reality sooner rather than later remains high and over 870 people have already signed up to the 'P2 for the price of a pint of beer per week' (£10 per month or more) Covenant scheme since its launch in March 2014. The average monthly donation is now over £17 per Covenantor (including Gift Aid) and the projected monthly income for our P2 project from the monthly covenant scheme is now running at around 110% of that of *Tornado* - a remarkable achievement in such a short period of time and all thanks to the generosity of our supporters. What is even more striking is that only 28% of A1 Covenantors (36% of P2 Covenantors) are regular donors to both locomotives, meaning that the overwhelming majority of the funds are being given by new supporters of the Trust.

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.

## AN AUDIENCE WITH THE *PRINCE OF WALES*

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:

ROADSHOW DATES FOR 2018:

- Saturday 1<sup>st</sup> September 2018 - Doubletree Hilton Hotel City Centre, Bristol
- Saturday 8<sup>th</sup> September 2018 - Derby Conference Centre, Derby
- Saturday 3<sup>rd</sup> November 2018 - Manchester Conference Centre, Manchester
- Saturday 8<sup>th</sup> December 2018 - Hilton Leeds City Hotel, Leeds.

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.

## PRESENTATIONS

If any railway society - or indeed other interested group - would like a presentation on the project they should contact us by email [enquiries@p2steam.com](mailto:enquiries@p2steam.com)

## EASYFUNDRAISING

Now is the time of year when many people start thinking about booking a summer holiday. Why not help the Trust at the same time by doing your online searches through EasyFundRaising, painlessly raising cash for The A1 Steam Locomotive Trust every time you spend online? You can find details of how to do this [here](#).

## 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. If you have a passion for raising money or engineering please do get in contact. For more information, please [email us](#).

## TRAVEL WITH *TORNADO*

For more information on *Tornado's* tours and where you can see her, click [here](#).

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

## OPEN DAYS AT DARLINGTON

We hold public open days at Darlington Locomotive Works on the first and third Saturday of every month. During April through to September we are open 10:00hrs to 16:00hrs, October through to March, we are open 11:00hrs - 15:30hrs.



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