

4709

The Night Owl

4709 at Tyseley



4709's chassis was moved to Tyseley late in 2021. This was done for expedience as much as cost and ready availability of skills and facilities. Included in the list are:

- Many tasks require specialist techniques, facilities, competences and expertise which are only available at Tyseley
- The project has transported numerous parts back and forth to Tyseley for their specialist and often unique input. Looking at the bigger picture, with axleboxes and wheelsets already on site, it has become clear that the way forward for 4709 is to complete the rolling chassis at the Vintage Trains workshop

- Other specialist machining services tend to be clustered in and around the Midlands region and so further economies, with reduced transport costs, are being realised
- We have appointed Mike Solloway as our Resident Engineer for the 4709 work at Tyseley and this has proved to be an excellent arrangement for the greater good of the project

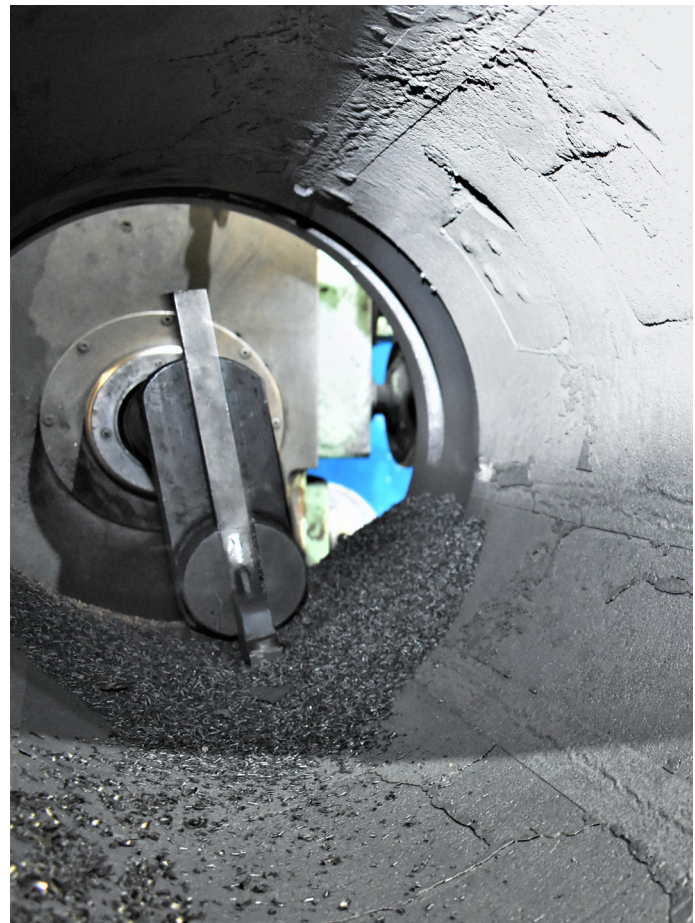
It also allows our engine to progress at that centre of excellence without distracting the busy Tyseley staff from their many other duties and projects

- For the security of our now large collection of components to be under lock and key in one central and accessible location
- Tyseley not only provides us with the facilities and storage space our project urgently needs, but it uniquely brings with it the father and son team of Bob and Alastair Meanley. Between them, they must surely be the most knowledgeable pair of steam railway engineers in the country

So, where better to progress 4709?



Fresh from the foundry, awaiting machining



Boring underway at Roach Engineering

Slow and steady...

We need hardly tell you how 2021 was a very challenging year for everyone associated with the 4709 project; the contractors, the suppliers and our own project team.

Yet, in spite of all the health issues, lockdowns and staff shortages, the 4709 project has made impressively steady progress.

So, what's has been achieved over the last 12 months?

- 4709's new cylinders will be complete by the time you read this newsletter – the “Polystyrene Nightmare” is over: new technologies for casting metal haven't always been as easy as we might have hoped
- Additional work has been undertaken on the front end of the engine in readiness to receive the new cylinders
- New leading centre stay has been cast and will be machined from dimensions taken once the extension frames are refitted
- The pony truck compensating arms have been cast and await machining
- New pony truck horn ties have been ordered and await machining
- The pony truck reins were returned to Tyseley, where the required Coded Welding could be undertaken – these now await fitting
- Manufacture of new brake beams is underway and was transferred to Tyseley for completion to meet VAB approval requirements – again regarding design and Coded Welding
- 4709's chassis was relocated to Tyseley for work to be undertaken to also meet VAB and Coded Welding requirements
- Patterns were made for the main cylinder covers which are now cast and await machining
- Patterns were made for the piston valve covers have been cast and await machining
- Patterns made for the piston valve liners which have been cast and await machining
- A new brake hanger has now been acquired from Tyseley to complete the set of eight – only re-bushing is required to complete the set
- The brake pedestal prototype has been machined and approved with the remainder in production
- Patterns being made for the main bearing brackets for the brake cross shaft

Richard lifts the curtain on 4709's boiler

Ever since the idea to re-create a 47XX, the question has always been whether it will carry the same no. 7 boiler as the original locos? Weighing our considerations was the no. 1 boiler we acquired from 2861 via the Barry Ten/Three Counties Project which could be used, but for the same reason Swindon chose not to standardise on it, we felt it's proven lack of steam generation for such a large locomotive militated against it.

4700 carried a No. 1 boiler for its first two years but with an inside steam pipe cylinder block, before being fitted with the larger capacity no.7. We have kept the no. 1 at Didcot as a contingency fallback.

4709's new cylinders having been cast and machined are almost ready to attach to the extension frames. These need some minor machining to align with the cylinder block and once this has been done the cylinders can be bolted up and aligned, then attached to the main frames for final alignment ready for wheeling during 2022.

Bringing the motion into the picture, we have been fortunate to have acquired much of the motion for 4709 with the exception of the connecting and coupling rods.

Back to the boiler; I have now done quite a bit of investigation into building a No 7 boiler from scratch in conjunction with Bob Meanley who has joined our team and will concentrate on the boiler whilst Paul Carpenter will continue to look after the mechanical side and oversee the tender restoration.

Clearly there would be considerable publicity to be had from building the first full size boiler in the UK since BR days and it is likely to create a lot of interest and I believe support. The No 7 boiler will be built to the original Swindon drawings, but before that can happen, we will need a smokebox which will also assist us in our publicity drive and fundraising.

This will cost in the region of £20,000 including the door and it would be nice to get this under way this year.

Donations can be made via the web site, by the form on the back page of this newsletter, bank transfer to the GWS 4709 Project (account 06710646, Sort Code 54-30-33), please e-mail richard.croucher@ntlworld.com if you use this method so we can identify your support. Or you can send a cheque for 4709 to Didcot, specifying the project and marking it for the attention of Richard Croucher.

4709's calendar for 2022

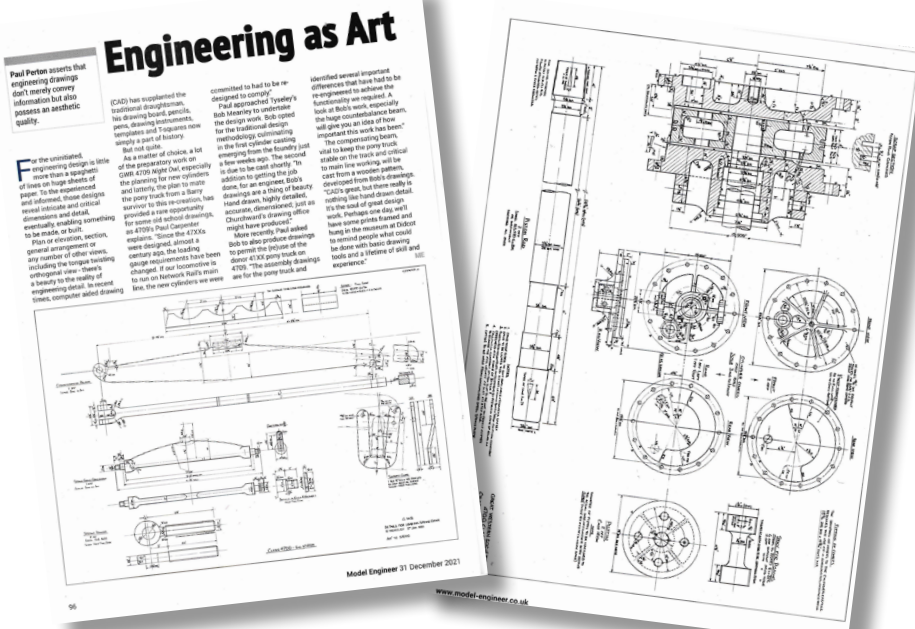
- Assemble the completed front end to the chassis including the leading centre stay and pony truck fittings
- Machine the suspension compensating beams
- Measure and recheck the horn apertures from the new cylinder centre lines
- Complete the machining of the main axleboxes
- Purchase a full set of main springs
- Fit all spring hanger brackets
- Complete all the spring fittings in readiness for main spring assembly
- Wheel the locomotive
- Complete the pony truck overhaul and fit under the engine
- Manufacture 4 no. new slide bars
- Overhaul 2 no. crossheads from stock
- Commence overhaul and refurbishment of the valve gear components in stock
- Complete the brake system with vacuum cylinder, main brake shaft, all pull rods and brake blocks

Web news

The Model Engineering page on 4709's Web site has started slowly, but is gaining impetus, especially with the support of Model Engineer magazine and contributor John Arrowsmith.

The December edition of the magazine carried two lengthy articles relevant to 4709; a full length article about Engineering as Art and an excellently illustrated piece from John Arrowsmith on the machining work underway on 4709's new cylinders.

Here's a link to the page(s) on our Web site: <https://www.4709.org.uk/47xx-modellers>



The mystery component on page 5 - it's a leading brake pedestal - the strange fixing arrangement is dictated by its location amid the extension frame bolts which retain it. The leading brake hanger is suspended from this pedestal.

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47XX photo gallery



Donations

When complete, 4709's motion will be part donor-sourced and part new. As mentioned in the last newsletter, the donor locos have been very generous, but we still require 8 rods, the largest of which are the coupling rods themselves.

The quotes are in and we're looking for just over £90k, to forge and machine these vital components, ready for fitting to 4709's new cylinders and rolling chassis.

If you've had any involvement, or interest in railway preservation, you'll know raising money is one of our most important activities. We also think that there isn't a better way to ask for donations than to lay out the options and let you - the donor - decide how much and how often sending us money is the most preferable. To get 4709 in steam by 2023/4, we'd like to ask for a minimum donation of £25. One-offs are great, but a regular commitment gives us the ability to plan and know our funding is (and will be) in place.

Yes! I'd like to donate

Once-off donation of £

*Cheques and POs should please be made payable to the Great Western Society Ltd, 4709 project**

Banker's order to make regular payments

Name:
Address:
Post code: e-mail:
GWS membership no.:

To: The Manager, Bank:
Address:
Sort code: a/c no.:

*Please pay to National Westminster Bank a/c 06710646, sort code 54-30-33 for the credit of the Great Western Society Limited, 4709 Project**

The sum of £ In figures:
On: Monthly until:
Date: Signed:

Gift Aid can boost your donation by 25p for every £1 you donate. It is claimed by the Great Western Society Limited from the tax you pay for the current tax year. Your address (above) will identify you as a UK taxpayer.

I want to **Gift Aid** my donation of £ and any donations I make in the future, or have made in the past four years to the Great Western Society Limited. I am a UK taxpayer and I understand that if I pay less Income Tax and/or Capital Gains tax than the amount of **Gift Aid** claimed on all my donations in that tax year, it is my responsibility to pay any difference.

NB! If you pay income tax at the higher additional rate and want to receive the additional tax relief due to you, you must include all **Gift Aid** donations on your self-assessment return, or ask HMRC to adjust your tax code.

Please contact the GWS if you wish to • change this declaration, or • change your name and home address, or • no longer pay sufficient tax on your income and/or capital gains tax.

* This order is in addition to any other standing instruction in favour of the Great Western Society.

Please complete and return this form to Richard Croucher, 4709 Project, Great Western Society Limited, Didcot Railway Centre, Didcot, Oxon, OX11 7NJ, or by e-mail to richard.croucher@ntlworld.com